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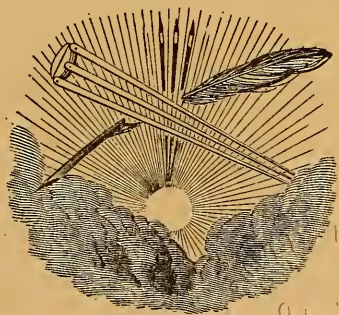
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DEVOTED TO PHOTOGRAPHY.

EDITED BY EDWARD L. WILSON.

THE OFFICIAL ORGAN OF THE NATIONAL PHOTOGRAPHIC
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March.—Vignette Study. Negatives by E. A. SCHOLFIELD, Mystic River, Conn.
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May.—A "Bonnie Scot" View. Negatives by J. VALENTINE & SONS, Dundee, Scotland.
June.—"Under the Apple-Blossoms." Negatives by WALTER C. NORTH, Utica, N. Y.
July.—"Lunch at the Ruins of Hunaudaye." From a painting by J. R. GOUBIE, Paris, France.
August.—Cabinet Portrait. Negatives by J. W. GEHRIG, Chicago, Ill.
September.—"The Fisher Boy." Negatives by J. E. WATSON, Detroit, Mich.
October.—"The Little Brother." From a painting by MEYER VON BREMEN, Berlin, Prussia.
November.—View in Dixville Notch, N. H. Negatives by EDW. L. WILSON, Philadelphia, Pa.
December.—"A Fickle Shadow." By LOESCHER & PETSCH, Berlin, Prussia.

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THE YEAR OF OUR MAGAZINE SEVENTEEN.

WE begin the new year, 1880, with a great deal more cheerfulness than we did its immediate predecessor. The prospect for good times is splendid; the subscriptions, accompanied by the kindest assurances of our usefulness and approval of our course in behalf of the craft, are coming in freely. We are in no doubt as to "which way" we are expected to steer, and we have not the dismal certainty before us that we had a year ago, of a hard combat with the shameless process-vender. Altogether, we are in better condition to attend to matters the most to our taste personally, and which are for the improvement, as well as the pecuniary aid, of our patrons.

We shall endeavor, therefore, to produce for you a more acceptable and useful magazine than ever before; to fill it with good, practical articles from the best sources; to give you the news of the world pertaining to our art, science, and business; and to most particularly and specially and continuously strive to help you improve your art knowledge. In this last department the work is most difficult.

Without one word of complaint against the generous ones who supply us with negatives, from time to time, for *our pictures*, we are free to say that the average should be

better. Even our offer of a golden prize, intrinsically worth a great deal of money, does not bring the number of good things we might reasonably hope for. There seems to be a reluctance on the part of photographers to allow their work to be seen by others. This should not be so. Our pictures are to serve as studies for all, and to teach the best styles and methods of work. There should be no mock modesty about it; no selfishness.

If any subscriber will *think* deep enough, and honestly, too, he must acknowledge that these pictures, during the sixteen years' life of our magazine, have been of great service, and have led the growth of photography in America. Let us go on together in the good work.

We are pleased to say, in this connection, that our arrangements are already made so far for 1880 as to secure, both in portrait and landscape photography, some admirable examples from home artists not only, but from Germany and Scotland, which shall illustrate new styles and new processes of both manipulation, posing, and printing, all the lessons of which shall be pressed home by the republication of the entire work of Burnet on *The Education of the Eye*.

Who can say, therefore, that we may not reasonably expect that the seventeenth year during which we shall send out our magazine shall be not only a prosperous one, but

one at the end of which we shall all be better educated in all that improves us and helps us every one to produce better results?

Our necessities make us, in closing, express the hope that we shall be substantially upheld by you in our purposes. We are publisher and proprietor, as well as editor, and dare not be too modest in asking you to subscribe for our magazine, and to pay promptly, that you may secure *all* of volume seventeen.

THE EDUCATION OF THE EYE.

WE confess to considerable anxiety lest our determination to devote a goodly part of our seventeenth volume to the republication of Mr. Burnet's unrivalled work on *The Education of the Eye* may prove a blunder.

We have long *wished* to take some such long step in this direction. We have frequently made short ones, with most encouraging results. How we have seen many of our now leading photographic artists grow! By small and slow degrees, but surely, they have advanced to the highest round of the ladder yet attained; and it is our desire that, for their own sakes, and for the sake of our fascinating art, that many be added to the number.

In almost every human mind, sundry and plentiful sources of enjoyment lie dormant, which can only be developed and called into operation through the sense of sight, and which can only be made to give out pleasure by the cultivation of that sense.

In every photographer these sources are always plentiful, and his opportunities for developing them are in greater number than those afforded by any other class of people. His art is a most bewilderingly delightful one, in its *physical* phase. What is there more beautiful to a degree than the development of the latent image, in any department of chemistry, saying naught of many other mysteries of the process all through? And so in the art department; no sculptor or painter has so many opportunities for real enjoyment through the eye, if educated to take advantage of them, as has the photographer under his skylight.

The old adage says, "Where ignorance is bliss, 'tis folly to be wise." That was written

for a different dispensation, or for worldlings, not for photographers.

Addison remarks, that "a man of polite imagination is let into a great many pleasures that the vulgar are not capable of receiving. He can converse with a picture, and find an agreeable companion in a statue. He meets with a secret refreshment in a description, and often feels a greater satisfaction in the prospect of fields and meadows than another does in the possession. It gives him, indeed, a kind of property in everything he sees, and makes the most rude, uncultivated parts of nature administer to his pleasures; so that he looks upon the world, as it were, in another light, and discovers in it a multitude of charms that conceal themselves from the generality of mankind."

Since we are, then, to have the best instruction ever written (so admit artists all) on the *Education of the Eye*, let us hope that you will all quaff deeply at this great fountain for securing pleasure and improvement, and derive from it real courage and help in the performance of your daily duties, accompanied by a new pleasure, a stronger delight, and largely improved results.

We believe that if the matter is rightly appreciated by you, that our coming volume will be worth its weight in gold to you, and so hoping, we refer you to the first chapter from Burnet on another page.

NOTES AND PRACTICAL SUGGESTIONS.

BY A. M. DE SILVA.

SOME three or four years ago I advocated the dowering of the plate-holder top and bottom, so that it could be turned around, thus giving an opportunity of drawing out the slide from either side of the camera. As the advantage is so great, and the extra cost to the manufacturer not more than ten cents, I have often wondered why they were not made in that way.

The other day (in using a large camera-box which drew only from one side), I was compelled to abandon the *best point of view* simply because there was not room to draw out the slide, while had it been arranged to

turn around, I could have secured a much better picture than I did. Our modern camera-boxes are splendid pieces of cabinet work, but still there is room for improvement. In the first place the fronts generally do not slide sufficiently high, frequently necessitating considerable tilting.

In one which takes the length of the plate horizontally only, and which is turned on end on the stand when the longest side is required vertically, the front should have a double action, sliding at right angles; and this form of camera should invariably have a double swing-back, or it will be impossible to obtain straight lines unless kept perfectly level.

Rising fronts on portrait camera-boxes are rarely seen, although very useful at times.

I noticed a specially good feature in a recently made large camera. A set of diaphragms fitted into it immediately in front of the plate-holder, running from $6\frac{1}{2}$ by $8\frac{1}{2}$ inches to the largest size but one taken by it, thus enabling one to easily secure the exact place on the screen, and making it easier to focus, besides cutting off extraneous rays, and thereby obtaining a more brilliant picture.

I have already written of the reversing of the holder, but there are other points in the holder which can be much improved upon. It is the rule always to *hinge* the door, and the holders have a happy faculty of kicking somersaults, much to the annoyance of their possessors, and damage to themselves, all brought about by the hinging of the door. Were the doors detached this would be avoided, a great deal of room saved, and it would be much more convenient, and the back would remain tight until worn out. If the back *must* be hinged, why not hinge it at the *top* instead of the side?

I have also noticed a spring-bolt attached to the back of the plate-holder, its liability to being sprung back making it a rather dangerous contrivance; besides, one fastening is not sufficient, on account of the liability of the back to warp.

A holder for the sizes above 8 by 10 inches, should have at least four fasteners, two at the bottom and one on each side, apart from the hinges.

The next thing open to improvement is a place to carry the plate-holder^s securely when the camera is folded. When they are sent out new, a loose piece of wood is fitted so that the holder will rest upon it. When in use, this is either discarded or lost, and the holder is constantly tumbling about, frequently damaging the slide, and altogether "taking the shine" off the box. Were two movable metal brackets let in at each end to the piece on which the focusing-screen rests, these could be drawn out when folded, to rest the holder on securely.

Business here is looking up; new specimens are being placed, and preparations generally are being made anticipatory of a good holiday trade.

The college "class photographers" are busy at work on the sittings, which, for a not very large number, occupies a very long time, many a college student having an idea that he may sit as many times as he pleases, in every necktie, style of collar, and suit he possesses, and the moustache (faint at times, suggesting to the photographer the propriety of keeping on hand as accessories a stock of false ones), bewaxed, and *sans* wax or boneblack.

The photographers themselves are to blame for a great deal of this, it being a part of the "understanding" that their subjects may sit as many times as they please. After taking into account the time occupied in making the work, the low figures, the formidable number of dead-head pictures (for every committee-man has an "average" order without charge), and the comparatively small orders of later years, it is *not* a sinecure; neither is it not always obtained by merit, actions which would equal "gin-mill electioneering" not infrequently being indulged in, which must eventually make the "good job" of "college photography" a thing of the past, either breaking it up entirely, or leaving it in the hands of medium "rushers" at dirt-cheap rates and with wretched pictures.

There are plenty of sensible fellows though, who acknowledge the capabilities of the photographic artist, and who are willing that he should be consulted, and his opinion counted as something.

Judging from the many beautiful and

tempting designs of Mr. Seavey, he, too, has been very industrious, seeking to help out and create ideas for the photographer.

(To be continued.)

MY PRACTICE.

BY T. M. V. DOUGHTY.

I CLEAN glass for negatives (after filing edges so they will not cut) by soaking in commercial sulphuric acid diluted about half with water, twelve hours or more, then *thoroughly* wash and let dry. When I want to use it I wet a piece of cotton-flannel with this mixture, two parts alcohol, one of water, and one half of ammonia (after using the ammonia for fuming), rub the glass with it, and rub dry with clean cotton-flannel; apply collodion, and place in bath in the usual manner.

I make my own collodion; somehow I do not have good luck in buying. As good as any I ever used consisted of

Ether and Alcohol, . . .	equal parts.
Bromide of Cadmium, . . .	2 grains to ounce.
Iodide of Cadmium, . . .	1½ " "
Iodide of Ammonium, . . .	3 " "
"Climax" Cotton, . . .	5 " "

I take pains to have my chemicals in good order and suited to each other, and my glass clean; and *never* albumenize my plates, for then they do not need it. I use iron developer of proper strength, and enough acetic acid to make it flow smoothly. I do not use alcohol in the developer. If the image is rather thin, after developing and washing off developer, I flow with a silver solution, about fifteen to twenty grains strong, and redevelop (of course, before any exposure to white light), and do so again if necessary; then fix with cyanide, wash *thoroughly*, blacken with iodide of mercury, wash, and show to customer. If satisfactory, and it is found necessary, intensify more, after thorough washing, by more flowing with the weak silver, and redeveloping, remembering to *wash* after each operation, and keep out of light while intensifying, and, before fixing, to avoid fogging. Then I dry and varnish with this varnish.

Alcohol (fluid), . . .	24 ounces.
Gum Sandarac, . . .	4 "
Oil Lavender (fluid), . . .	2 "
Chloroform (fluid), . . .	3 drachms.

Filter the gum solution through filtering-paper, then add the lavender and chloroform. Use gentle heat in varnishing. I retouch on same varnish with Dixon's pencils. Some one has said, "Add castor oil to varnish, to make it soften." Do not do it, unless you want your paper to stick to the varnish after the sun has warmed it.

I do not want too much cadmium in collodion, as it will be gelatinous and will not flow smooth, and not too much ammonium, or it will not keep well; but I *do* want it sensitized *strong* enough for a bath thirty-five grains strong, which I sun occasionally, and add more silver solution, as necessary; also add C. P. nitric acid, if necessary, to make the bath more clear. I filter developer, and use it over (prefer it so), strengthen when needed, or reduce with water and acetic acid, if so strong as to streak in developing. I soak off varnished negatives in a solution of common potash, strong enough to dissolve the varnish, but not so strong as to spoil the glass.

I might say, perhaps, that this collodion sometimes becomes over-sensitized, known by showing opaque streaks by transmitted light, or black streaks by reflected light, on the corner where the collodion is the thickest; more likely to occur in cold than in warm weather. The remedy is simple: plain or less-sensitized collodion (*sometimes, longer setting of collodion will do*).

For silvering paper, twelve ounces water, one ounce (or more) nitrate of silver, two ounces alcohol, one-half drachm aqua ammonia. Dissolve the silver, then add the ammonia and alcohol together, the *first* time mixing; *nearly* clear the solution (dissolve the oxide of silver precipitated by the ammonia) with C. P. nitric acid, afterward adding some of the old solution to the new mixture, which will clear it. Keep it at about thirty-five grains (to ounce of water) strong by hydrometer, by adding fresh solution when necessary.

This solution will not turn red. All the albumen that comes off will settle in the bottle. Keep it corked tight when not in

use. It will print quick, and make strong, clear prints, if the negatives are good for anything. It can be used for either plain or albumen paper, and you can tone red, black, blue, or gray.

Float paper as long as necessary; not too long, especially in hot weather. Fume as usual; print strong; tone with gold and bicarbonate of soda, and take Hearn's *Printer* and common sense for your guide. Put prints in strong common salt solution from hypo solution, to prevent blistering, and keep the paper in a damp place before silvering, to make the operation easier.

We mount prints damp, with *fresh* solution of gum arabic, except those on plain paper to be finished in india-ink or water-colors. Those we mount with *fresh* starch-paste, so they will not come off by wetting in coloring. We touch up albumen prints with india-ink mixed with colors to match color of prints. So brush-work will not show in burnished pictures, lubricate with wax, and burnish carefully, with burnisher hot.

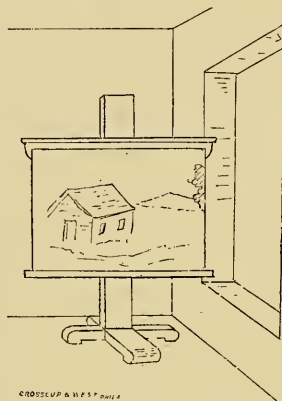
Finally, *advice*: Take the utmost pains in all operations; keep everything clean, and all solutions properly filtered; subscribe for the *Philadelphia Photographer*, and read it. Be gentlemen in all respects, and never go near beer or whiskey shops, nor allow any loafer, genteel or otherwise, to smoke or swear in your gallery. Then, if you cannot make a living in photography by doing good work at living prices, quit it; but *do not* disgrace the profession by making card photographs for one dollar per dozen, nor any "tintypes."

COPYING OIL PAINTINGS.

BY W. L. SHOEMAKER.

WITHIN the last year or two I have had occasion to produce many enlargements from paintings for lithographic purposes, and have handled specimens of almost every kind, portrait, landscape, and marine. I soon found that lighting from more than one point produced reflections that were avoided if the light came direct from one point only, and also the stronger the light the finer reproduction.

Also, that any light falling on the floor, or objects in front of the picture, gave counter reflections, and they can be easily avoided by covering with light cloths, or avoiding such location.



The simplest plan was a success. Any one trying it will succeed, without doubt, in copying a painting, strong, crisp, and without a reflection. That is, to place the picture in a perpendicular position in the sun at a side window, placing near the dark edge of the window, and in almost a direct line with the light. (See drawing.)

A little diluted glycerin assists to clear shadows for copying, but I would advise against the use of oil, as it will not dry quick enough before delivery.

HOW BUSINESS IS, AND WHAT OF IT.

RESPONSES TO OUR CIRCULAR LETTER.

(Continued from page 379.)

FROM E. M. ESTABROOKE, BROOKLYN, N. Y.

I HAVE considered the questions you submitted, but fear that I cannot give satisfactory answers, for the reason that I have not been actively engaged in photography since May last. And then you do not feel the pulse of the business as I could under other circumstances. My opinion, I fancy, would be of little value to publish, as you want facts.

The question about the improvement of the public taste has brought to my mind a conversation with one of our middle-class artists, in which he said that he had arrived

at the conclusion that there seemed to be but two classes to work for: those who were very exacting, and required the finest work, and those who had no taste at all, and would take anything, provided it was cheap. And this may really be the case, for the only galleries that seem to be busy here in New York are the very high-priced and the club galleries.

These latter places have had an exceedingly lively time these last few years, and if it were not that I am sufficiently conversant with the business to know better, I should really be led to believe that they were making money fast; but that thing is out of the question on such small profits as they must have. Card photographs at ninety cents per dozen cannot afford much margin for profit.

I do not go so far as to say that this club work injures the business, because I think it only affords an opportunity for certain people to get pictures who, at higher prices, would go without.

Greater injury was done by one individual in New York, who claimed to hold a high position in the art, and first started the downward tendency in prices, than a thousand of these small club galleries could do.

FROM J. LANDY, CINCINNATI, OHIO.

I will try to answer your questions regarding business, its prospects, etc.

My business has been better during the summer than for years, and is increasing. We expect a fine holiday trade. As regards the showing of proofs, it is an evil that has grown upon us for so long a time that it will be difficult to get rid of. In the first place patrons always expect more than one to choose from. Secondly, it requires much more printing. It not only makes it very expensive, but the practice has caused many to try experiments at our expense, more particularly with ladies, such as trying different styles of dress, arrangement of hair, etc.

My system is that when parties desire to sit over, if any change is made in dress or hair, I charge them for a new negative. I find that in nearly every case they wish to try an experiment with the costume or arrangement of hair, and not because the

artistic execution is at fault in any particular. I always secure pay in advance, and never guarantee satisfaction, but always a good picture, which ought to be satisfactory. I raised my prices four years ago, and they remain the same. I believe the people are now more appreciative and willing to pay good prices, except in localities where photographers are always cutting rates to run each other. As regards low-priced competition, the greatest injury is to those who practice it, as they eventually find out it does not pay, and they are worn out mentally and financially. Then there is the tramp who infests the country, canvassing for work at any price he can get for it. They certainly injure the business in small towns, and are degrading to the profession.

In reference to backgrounds and accessories, I consider they are a great help to keep novelties before the public; and Mr. Seavey has done more toward that end than any one else, and he should be encouraged. I am hoping that we will soon have a convention where the proper understanding of conducting business will be discussed, instead of so much about processes.

FROM FRANK THOMAS, MISSOURI.

In reply to your "circular letter," propounding thirteen (13) questions, to which you wished answers, I send you the following:

1st. Business is rather slow at this season of the year; but I look for a fair trade during the winter and spring.

2d. I think it will continue to increase, and that we will do a better business the coming season than we did the past.

3d question.—"Do you show proofs?" etc. Yes; but not as much as I used to do. I am trying to do away with that *nuisance*; for it has been the means of photographers doing three or four times as much work as they were paid for, and gives no better satisfaction in the end. Still, if they insist, I show proof. But an unfinished proof is a lie on its face. Negatives are now made so much thinner than they formerly were, in the days of the iron-clad negatives, that any little freckle or pimple shows very plain, unless retouched; and it does not pay to

retouch a negative for a proof, when the chances are against you, that it will have to be taken over. I show the negative now, and it gives as much satisfaction as the proof, and I have less resittings to make.

4th. "Do you secure pay in advance?" That is one of my rules; but am sorry to say that I have not been able to work strictly to it; but find less trouble and more satisfaction when I do. It undoubtedly is the correct way to do business; and were I to remove to a new place, I should enforce it strictly.

5th. Yes, I can safely say that I am encouraged to improve my work.

6th. "Are your efforts to please your patrons appreciated?" Not always; many of them would not be pleased were you to double your exertions to please them. Then there are others who do appreciate your efforts, and make that appreciation felt.

7th. Yes; low-priced competition has increased; and in my estimation it has done real damage; for there is scarcely a place of three or four houses, and hardly a cross-road, but has some one making cheap pictures, four for twenty-five cents, and even as low as ten cents for a single picture. Such work as that is not calculated to educate the masses to a higher appreciation of the art. On the contrary, it instils in them a desire for something cheap; and they think, if Mr. — can make pictures for ten cents apiece, that Mr. So-and-so is too high when he asks fifty cents for one or \$3.50 for a dozen cards.

8th. "Do you usually make more than one sitting?" It is my practice to make what I think is as good a negative as I can make of the party; then show it to them, and if not satisfactory make another, but I only make one impression on each plate.

9th. "Has the public taste improved?" Yes, and is decidedly more exacting. The public are better judges of work to-day than they were a few years back; consequently the better class demand better work.

10th. "What sizes and styles are the most popular?" The cabinet is the most popular as to size, and it is about equally divided between the vignette and plain print as to style.

11th. Yes, the demand for fancy grounds

is on the increase. I like a neat fancy ground; but my choice is for something plain. I do not think there is anything as nice as a nice, well-graded, plain ground; but tastes will differ.

12th. Your twelfth question is a hard one for me to answer. In some instances I can say yes, and in others no. Retouching is an improvement, if it is not carried too far. If it is used to soften wrinkles and shadows, and to remove freckles and tan-marks, I consider it a great improvement; but if carried too far, it is an injury, so far as to the likeness. Burnishing is also an improvement, for if correctly done it makes the print more durable, making it impermeable to dampness; but I am satisfied that the double-gloss paper is not an improvement, as prints made on it are not as durable as those made on single-gloss or plain paper. Neither is the pink paper durable, as is attested by all displays made at the door. The prints have all turned brown, and in a very short time at that. Not so with prints made on single-gloss white paper.

13th. "Have you reduced prices within two years, and if so, why?" I answer, yes, and will give the reason for so doing. My prices eighteen months ago were \$5.00 for cards, \$3.50 for half-dozen; \$9.00 for cabinet, and \$6.00 for half-dozen; larger work in proportion. These prices I consider about fair for good work. Of course you will find plenty to complain of the price, I care not what it is; but when men who stand at the head of the profession in large cities reduce the prices to \$2.50 and \$2.00 per dozen for cards, and every one else around you reduce, some even to \$1.00 per dozen, I was forced to reduce my prices or get nothing to do, at least not enough to keep the wolf from my door. Still, my prices to-day are reasonable, after the reduction. I am now getting \$3.50 for cards, \$2.50 for half-dozen; cabinet, \$7.00 per dozen, and \$4.50 for half-dozen; other work in proportion. I do not make the regular *gems*, but make single ferrotypes, and make no sittings for less than fifty cents, which I consider cheap enough. If you do not think enough of your business to try and improve your work, help elevate the profession, and get a fair remuneration for your labor, you

had better look out for some other avocation where *muscle* commands more than *brains*. If *cheapness* is the only merit you possess, people will say at once, "He aint much, or he would not work so cheap." If you were sick, and needed a doctor, would you send for the one who would charge the least fee? No; you must have confidence in the man's ability to cure you, or you would not employ him, regardless of his fees. Are other professions better than that of photography, that they should be better paid for their experience and knowledge? I am sure that the photographer's investments are greater than those of the lawyer or doctor; and it takes him longer to learn his profession than either of the others. Then why should he not be entitled to the same consideration, courtesies, and emoluments as the others? I find that photographers who ask a fair price for their work, and are continually striving to improve the quality of it, are much better thought of, and are better patronized, especially by the middle and better classes of people. Of course, you lose the trade of those who go "on the cheap," and who want tintypes for fifty cents per dozen, or less, but if you do lose that trade, have you lost anything? I think not. I do not think it advisable to combine tintypes and photography together. Make a specialty of photography; study to improve your work; ask a fair price for it, and on my word for it, you will succeed.

If anything I have said will be the means of leading any one to a better appreciation of the position he holds as a photographer, then I will have been rewarded. Fearing that I have encroached on your valuable space, I will close, wishing you success in all your efforts to improve your journal. I am yours to command.

FROM C. A. ZIMMERMAN, MINNESOTA.

1. Business is improving.
2. From present outlook I shall double my business the coming season.
3. We show a rough proof untuned.
4. We often receive, but seldom demand, pay in advance. Strangers always offer to pay in advance.
5. Are continually striving to improve the quality.

6. Am happy to say our patrons appreciate the same.

7. Low-priced competition is on the increase, but does an established business little, if any, harm.

8. We make never less than two sittings, and oftener four, and allow choice, charging extra if two negatives are to be furnished.

9. Public taste here, as elsewhere, has been educated, and the best class of work is demanded.

10. Cabinets and promenades are here the favorite styles.

11. Few fancy backgrounds are required, and few accessories.

12. Judicious retouching is certainly a great improvement to a negative; but, alas, it is too often overdone.

13. Prices have not been reduced.

WORKING GELATINO-BROMIDE PLATES.

BY E. K. HOUGH.

IN the November number of the *Philadelphia Photographer*, I noticed an allusion to the working of gelatin plates in Rochester, and being there a few days later, I made inquiry, and found it true that a young photographer there, celebrated for the excellence of his views in that beautiful city, was using gelatin plates with great success as to quality and certainty of results.

The plates I saw, negatives of both summer and winter scenes, were characterized by great delicacy of detail, yet vigorous and bright.

I especially noticed one of the Genesee Falls, taken with the recent snow covering the ground; which was without any hardness or loss of detail in either lights or shadows. This I considered a most difficult test.

He intends to use the plates in gallery work, and said that a day or two before he had taken a portrait indoors in two or three seconds, full timed on a gelatin plate, which was under-timed under the same conditions with a good working regular bath and collodion, with twenty seconds, and that speaks volumes for its rapidity.

He works the modified Bennett process, but modestly disclaims any credit of his own,

giving all the honor, whatever there may be, to Mr. George Eastman, an amateur there, who worked it all out in his own way, and gave it to Mr. Monroe.

I asked if he thought the lake had any influence. He laughed at the idea, and he does not believe that it makes a particle of difference. I asked if he found any difficulty in hot weather, as some have. He said, not any; some of his best negatives were prepared and made in the hottest part of the summer.

The power of controlling it thus is what Mr. Eastman has discovered, if I rightly understood him, and is what will make it generally practical.

PURE WHITES IN PHOTOGRAPHS.

BY FRANK THOMAS.

ONE of the first requisites to good prints, after a good negative, is good paper and a good silver solution. Most of the paper nowadays will work if it is handled just right, and prints can be made on any silver bath, but the one I have found to be the best is made as follows:

Make a solution of nitrate of silver in water up to the required strength (for double gloss S. and M. Dresden I use it at 50 grains to the ounce, and for Clemons' paper 30 to 35 grains to the ounce, and only float 45 to 60 seconds), and render it *perfectly neutral*. Then to each ounce of solution add 2 grains of nitrate of potash; shake thoroughly.

Now pour out enough of this solution into a graduate, so that it will contain 3 or 4 grains to the ounce of that left in the stock-bottle. Say you have 60 ounces at 50 grains to the ounce: 4 ounces of the stock solution will contain 200 grains of silver, and there will be between 3 and 4 grains to each ounce remaining in the stock-bottle.

Now to this 4 ounces add of a saturated solution of salt enough to precipitate all the silver in the 4 ounces. When precipitation is complete, let settle. Pour off the liquid, and *thoroughly wash* the precipitate, and add to the remaining 56 ounces in stock-bottle. *Never* use less than 3 grains of chloride to the ounce, and more will do no harm.

Shake the whole well together, and add 1 ounce of pure glycerin to every 12 ounces

of solution, and set in the sun until the precipitate is well darkened, occasionally shaking or stirring, so as to bring the whole mass under the action of the light.

When the darkening process is accomplished, the clear solution is ready for use, and is undoubtedly the purest silver solution made. Do not neutralize the solution after the addition of the chloride. After using, always pour back into the stock-bottle, and set in the sun. If it refuses to clear up, add fresh chloride, and replace in the sun, and it will be all right.

Should it, after long use, get saturated with albumen, decant the clear part into the evaporating-dish, and evaporate down to one-third. Let cool; then pour out into stone-china saucers or an agate iron pan (never use a porcelain evaporating-dish unless you wish to reduce its size), and add an equal amount of alcohol (95 per cent.), and set on fire. Do this away from all draft, and it will burn about three minutes, and will precipitate all the albumen in the shape of a curd.

Now reduce to 50 grains, add fresh chloride, not less than three grains to the ounce, and set in the sun to darken, and when the chloride is thoroughly darkened, your solution is ready for use.

Float your paper from one to two minutes, draw over a glass rod or the edge of a dish, if smooth, and blot off all surplus silver, and then dry quickly. Fume from ten to thirty minutes, according to the size of the box and the atmosphere.

Now that we have a reliable silver bath, and our prints are all made, we will proceed to wash and tone. Run the prints through two changes of water, and then let them remain in acid water fifteen to twenty minutes, keeping them well stirred all the time (acid water, 6 drachms of acetic acid No. 8 to 1 gallon of water). Then quickly and thoroughly wash in six to eight changes of water, and they are ready to tone.

Toning bath as follows: (Make a saturated solution of borax in cold water):

Saturated Solution of Borax,	. 1 ounce.
Water,	. . . . . 6 ounces.
Bicarbonate of Soda,	. . . . . 10 grains.
Salt,	. . . . . 10 "
Gold,	sufficient to tone.

Put the gold in first, then the borax, soda, water, and salt. Tone until the high-lights are about what you want when finished; then place in clear water.

Fixing solution: Keep on hand a saturated solution of hyposulphite of soda, and make your fixing bath 1 ounce of saturated solution of hypo to 6 ounces of water. Make alkaline with bicarbonate of soda.

Now for the secret of pure whites, and the only way you can get them pure. Procure your half ounce of aniline blue, letter I, and dissolve it in 16 ounces of water. When your fixing bath is made up, add from 15 to 20 drops of the blue to every 40 ounces of fixing bath. Fix your prints from twelve to fifteen minutes, and remove to a strong solution of salt and water. Let them remain five minutes, and then gradually dilute with fresh water, so that the change of temperature will not be so sudden, and you will never be troubled with blisters, and will always have *pure* whites.

Now, Mr. Editor, the above formulæ were given to me over a year ago by my friend, J. R. Clemons, and I have worked them ever since with perfect success.

There are plenty of formulæ published, but few who give them give any instructions whatever, consequently so many fail to get any good of them. The quantities are given, but the proper mode of mixing is left out. Why is this so? I was always taught that if a thing was worth doing at all, it was worth doing well.

Now, Brother Photographers, give us your formulæ, but give us full directions as well as quantities, and we will succeed much better. Take, for instance, a formula for collodion composed of iodide of potassium, iodide of cadmium, and bromide of cadmium, "no instructions." Can any one dissolve these three salts in alcohol? I say no; they will use water for the potassium. But they can be dissolved in alcohol by first grinding or pulverizing the potassium, then the bromide of cadmium until quite fluid, and then the iodide of cadmium until the whole is quite pasty, when all will very readily dissolve in alcohol without any precipitation.

So I say again, Brother Photographers, whether you be theoretical or practical, if

you give your formulæ, give it full and complete, so that the dullest of us may comprehend, and be thereby benefited.

RAPID SOLAR PRINTING.

A FEW weeks ago we had the pleasure of a visit to the solar printing establishment of Messrs. Charles Paxson & Bro., No. 612 Broadway, New York, where we witnessed a novel feat in photography which we must describe.

The sun was shining brightly, and Mr. Paxson was ready to proceed with his day's work. The development process is used, and the results are soft, beautiful, and as excellent as any artist could desire to work upon.

We first inspected some prints already made, and then asked, "How rapidly can you print these, Mr. Paxson?" "About one every four minutes," was the reply.

We looked incredulous, but being invited to the printing-room, clambered up the stairs, over the roof adjoining to the next, where the great one eye of the reflecting apparatus was already taking in the sunshine for its work.

An assistant now appeared with a sheet of paper, which was at once thrown down upon the table and fastened by the corners. It was then sensitized, the solution being poured from a large pitcher, and then swabbed over the sheet. While the assistant did this, the negative was placed in the camera by Mr. Paxson, and focussed, the assistant by this time being ready with his rule to measure the size directed by the order on the negative.

In a few seconds the printing was accomplished, and the development followed in the same manner as the sensitizing was done, not forgetting the proper washing. This course was thrice repeated, and at the end of fifteen minutes by our watch, three splendid life-size solar prints lay floating in the last wash-water in a gigantic tank!

It was the most interesting operation we have seen for a long time, and though a coarse simile, reminded us more of killing hogs at Cincinnati than anything else, only the results were life rather than death.

And thus the operation goes on all the

time with these well-known gentlemen. They use a direct printer when required, and they employ the oxyhydrogen light when the sun refuses to smile for them. Enterprise and good work has made them many friends and a large business.

A DESTRUCTIVE FIRE.

Just as the sheets of our last issue were being carried from the printer to the binder, the large warehouse and manufactory of paper mats, ferrotype mats, and gilt beveled cards of the well-known firm of A. M. Collins, Son & Co. was totally destroyed by a fire, which broke out in the basement just before noon on November 30th. We had only time to include a circular announcing the catastrophe.

The result of this fire was the destruction of a large line of the fine card-mounts, etc., used by photographers; of all the lithographic stones and machinery used for printing designs; of the machinery for producing the elegant gilt-beveled and gilt-edged cards of all styles; and of the department devoted to the production of mats of all kinds.

A fire could hardly have occurred in this city that would embarrass any one class of people all over the country to so great an extent as this one, for no other house in the country caters to the wants of photographers to any extent in this line.

It is greatly to be deplored that such a calamity should occur just at the holiday season, but it will not be long before the demand can be met again, and matters will work as of old, or even better. Meanwhile our friends ask patience on the part of photographers, and promise to do their utmost to fill the orders which are imperative.

Fortunately their largest factory, where all the plainer styles of cards are made, still stands, and is running night and day with an enlarged force, so that plain card stock may be had in any quantity at all times.

A new warehouse has also been established at No. 513 Arch Street, and already looks well stocked with goods, and is alive with business.

It will not be long, therefore, that those who were caught with a small supply of

their usual mounts on hand, will be compelled to content themselves with plainer styles.

Of the fire we have only to say that no lives were lost, though so suddenly did the flames break forth, that it was with some difficulty that the inmates of the building escaped. It was a sad sight to see that splendid building, and splendid evidence of the growth of American photography, crumble into ashes, but, Phoenix-like, it will soon rise, and even now its enterprising and useful proprietors are under full sail again.

WHAT PHOTOGRAPHERS SAY.

INASMUCH as the disposition to hold a convention of the National Photographic Association still seems very feeble, we must content us with using the magazines as the best means of communicating with each other. We therefore offer the column heretofore known as "Voices from the Craft," under the new heading above, for the free intercommunication of the craft one with another. Let us hear from you on all business topics which interest you individually or collectively.

To begin, gratitude compels us to acknowledge personally the real help and comfort we get from the many kind letters which come to us now with renewed subscriptions for 1880. We have room for only one example:

DEAR SIR: I respond most cheerfully to your call for renewal of subscription, and deem it, as I have for years, the most profitable investment any photographer can make. I have them nicely bound, and can always find something interesting and instructive in back volumes—quite as enjoyable as new matter; and just as long as we live I intend to see its pages monthly. I have taken every photographic publication that has ever been issued in this country, and while I look upon Snelling's *Photographic and Fine Art Journal* as a big thing, I most heartily award yours the palm. I desire to express to you my most humble and hearty thanks for the bold stand you have assumed in relation to patent humbugs and process-mongers. While I am always ready and willing to pay

for any improvement, I dislike very much to be gulled. You have undoubtedly saved the fraternity thousands of dollars, and I hope they will show due appreciation of it.

Since 1847 I have been constantly "under the skylight," etc., and never weary of the business. I maintain good prices, and, my patrons say, make good work, consequently I am cheerful and contented.

Inclosed find \$5.00 for the *Photographer* for 1880, and wish I could get you a dozen new subscribers. You may send me the stereoscopic views, if you please.

B. F. POPKINS.

GREENFIELD, MASS.

AS TO THE N. P. A.

I see there is some talk of a revival of the National Photographic Association, or the forming of a new one. I am in favor of either resurrecting and remodelling the old one, or forming a new one. Although I am a life member of the National Photographic Association, I will pay my share of the expenses towards having a convention next June or July in some central locality. We need one bad. Talk it up if you can. I think it would be a good idea for the Executive Committee of the old National Photographic Association to arrange for holding one more convention, if they can get an assurance of enough money to pay the expenses. At that meeting we can decide whether it will be best to remodel the old National Photographic Association, or disband it entirely and form a new one. We certainly must have something to unite us closer together.

I say for one let us have one more convention some time next summer.

J. A. W. PITTMAN.

A REAL JOKE OR TWO.

A young photographer who had lost all his means by purchasing "secrets," asked a process-vender what he should do with his "last dollar," which he held up before him.

"I'll take it on account for the best process out," was the response.

"I see you do not take the *Philadelphia Photographer*," said a visiting poser to another.

"Indeed, no," was the reply. "When I

see a bad picture in it by some one else it annoys me. If it should happen to be a good one, why that is simply horrible. So I stopped the journal. It made me unhappy."

JEX.

LOOK HIGH.

Last night's mail brought the welcome *Mosaics* to hand. I like the encouraging tone of your leader. Long may your valuable publications live, and their real value be appreciated.

My article being my first in connection with photo. literature, I felt somewhat anxious concerning its reception. I did not know but what the editor might consider it too poetical. I have always thought during my short intercourse with professional photographers that, as a class, they lack in that respect, and I seriously think that should the most of them deal more with the *sublime*, their works would be of a higher standard artistically. I also think that a great many in their writings show entirely too strong a tendency to express themselves in phrases entirely slangy. This I think a great mistake. We are, or at least ought to be, a fraternity of artists, and not horse jockeys and gamblers; therefore our tone of speech, manner, and writing should indicate our profession; but thanks to the strenuous efforts of the editor of the *Philadelphia Photographer*, and many good, able, and refined writers, things are rapidly improving in that direction, and from the bottom of my heart I hope the day is not far distant when I shall no longer be ashamed to add that much-respected title, "photographer," to my name. It is a pleasing fact, and one which corroborates my statements, that the most prosperous and famous photographers of to-day are men possessing culture and refinement, and who treat their customers in a manner which they need not blush to have spoken of. One would suppose to read this that I was addressing a person ignorant of what I write; but, pardon me, I only address you thus, feeling that you are in sympathy with my sentiments, and my only proof are your writings, of which I am a reader. To show you I practice what I preach in dry plate, I send you two pictures made with Newton's portrait

emulsion, and a view from my own lair made with his view emulsion. The portraits were made when it would have been impossible to have got any results at all satisfactory with the wet. I gave one twelve seconds and the other fifteen. "By their works ye shall know them."

THOMAS H. BLAIR.

IN EQUITY.

In answer to the query by E. B. Rogers in the November number of the *Philadelphia Photographer*, let me say that having a few years ago built a gallery upon leased property, to run seven years with privilege of removal, and coming near having a lawsuit at the end of the lease, the owner having died and the estate being in the hands of executors, my experience may be of use to Mr. Rogers, or some other artist.

1st. The statutes of different States vary, hence it is well for each man going to add improvements to real estate to consult a lawyer, pay him \$10 for an opinion, and get him to draw up your papers; it may save you trouble and costs.

In my case I drew up my own papers, carefully wording the entire contract, had it signed in duplicate, and placed upon record as legal notice to the world that my improvements were a legal incumbrance upon the property, and hence no mortgage or sale could affect my rights. During my lease I sold the building at about half its cost (rather than remove it) to the owner, with the written agreement that when my lease was out I was to dismantle the house of all skylights and fixtures, and it should never be used as a gallery by any one during my life upon pain of reverting back to me. I dismantled it, a new artist desired it as a gallery, and the executor forbid my completing the preparations. I told him to consult his lawyer, which he did, and backed down. In this State it is a well-established principle of law that a verbal contract is only good when its complete consummation takes place in twelve months, but is always subject to the uncertainty of oral proofs and rebuttals by men whose memories may be very defective or warped by interest or corruption; but improvements upon real estate are presumed to be-

long to the estate, and do, so far as purchasers or mortgagees are concerned, unless they were made under written contract, and that document placed upon record as a legal notice to these parties. Now before the mortgage was made, if you notified the mortgagee of your interests, and also the public who might purchase under forced sale, your rights might hold; but it is extremely doubtful.

Consult a lawyer, get the best legal advice you can, and even then, when you come into court, the most trivial technicality may cause you to lose your case and pay costs.

H. B. HILLYER.

A WORD OR TWO FROM US.

To intending correspondents we beg to say that the United States Postal Law is so changed that if you put the name of your village in your letter, instead of the name of the post-office, you will not get an answer hereafter. There are over 70,000 villages whose names are not the names of their post-offices. If you do not put on the name of the *post-office*, your answers will be sent to the dead-letter office, and you will be complaining every week, and every answer to a complaint will go to the dead-letter office.

A good way is to put your full address at the *bottom* of the letter, all just in the same form that it should be on an envelope. It is easier found.

There are no words in your letter of as much importance to get right as your name and address; and there are no words in your letter that, as a rule, are written with more carelessness; and no words so hard to make out, as there is no connection to them to help get the sense.

SCIENCE FOR THE PHOTOGRAPHER.

THE celebrated physician, Dr. Burgræve, Emeritus Professor of the University of Ghent, in Belgium, and Surgeon-in-Chief of the Civil Hospital of that city, has recently arrived in London for the purpose of introducing in England his new system of "dosimetric medicine." This system, which uses medicines (especially alkaloids) under the form of *granules* containing a

definite and *invariable* quantity of the active substance, enables the physician to fractionate his doses according to the cases he has to treat, and is very convenient under almost all circumstances. The granules of Dr. Burggraeve are manufactured with great care at Paris, by the house of Chanteaud & Co., chemists, and it seems to me that it would be a good thing if it were possible to furnish for photographic purposes the different chemical substances the most frequently used, under the form of granules composed of an inert substance, and of a quantity always constant of an active substance. Each granule *invariably* containing the same quantity of the chemical or photographic product, the operator would no longer be put to the inconvenience of weighing, which is always long and tedious. All he would have to do would be to count the granules.

Let us take, for example, nitrate of silver. Let us suppose that this salt could be obtained in granules containing a centigramme of nitrate mixed with an inert substance, such as the sulphate of baryta or sulphate of lime. If it was desired to introduce into a bath one decigramme of nitrate of silver, *ten* granules would be counted; the inert substance being insoluble, would be eliminated afterwards by filtration.

By taking inert substances of an insoluble nature, it is possible to manufacture such photographic granules sufficiently large to be of convenient use, and in which the fixed proportion of the active substance would exist in a quantity mathematically exact. The substances that might especially be manipulated under this form of granules are nitrate of silver, iodide of cadmium, bichromate of potash, bichromate of ammonia, pyrogallie acid, salts of gold and platinum, and several others of almost daily use in photographic practice.—DR. PHIPSON in *Le Moniteur*.

HERR FALK's method for the photo-decoration of metals, consists of coating the metallic surface with a photographic film, which is then exposed under a transparent positive; by this arrangement the parts lying beneath the dark places of the positive are not affected by the light, and are consequently capable of being etched. With

carved surfaces, a print taken in fatty ink on paper by a photographic method is transferred to the metal, and all the parts covered with the ink are by this means protected from the etching. It is a peculiarity of this process that the etching fluid colors all the etched places black, and this adds considerably to the effect of the whole.

A NEW method of photographic printing, by Herr Schahl, is to coat a thin zinc plate with chromated gelatin, which he then exposes under a negative. The film is then rolled up with some reducing substance, which adheres only to the parts affected by the light. Tracing-paper impregnated with iron is then pressed against the plate, and, the iron being reduced at those places, an image is obtained, which is said to be much more delicate than one produced by ordinary photo-lithography.

PAPIER MACHE for small work is made by boiling clippings of paper in water, beating them to a paste, adding glue or gum sizing, and pressing into oil moulds.

ACCORDING to *Pharm. Zeitung*, a very handy sulphuretted hydrogen apparatus may be made by putting into a large test-tube a mixture of equal weights of paraffine and sulphur. On applying heat, hydrogen sulphide is given off, and on withdrawing the lamp, the evolution of gas at once ceases, so that the same mixture may be used many times, and will last for a long period.

A PHOTOGRAPHER in Germany has made seals and stamps with the portraits of his customers. A thin layer of gelatin, sensitized with bichromate of potash, is exposed to the action of light under a photographic positive, by which the parts acted upon are rendered insoluble in water. The gelatin film is immersed in water, and the parts not acted upon by light swell up, and we obtain a picture in relief, of which a plaster cast can be taken. A galvano-plastic copy being taken of the cast, we have a metallic *fac simile* of the photograph, which can be employed as a seal.

A UNITED STATES patent has been granted to A. E. Mery, of Paris, for a composition for applying colors, specifying the following ingredients: Glue, 25 parts (by weight);

glycerin, 534 parts; water, 208 parts; white wax, 208 parts; strong solution of ammonia, $12\frac{1}{2}$ parts, and usin, $12\frac{1}{2}$ parts, dissolved in ether. Any coloring matter may be mixed with this paste, thereby forming a paint.

THE easiest way to clean bottles that have contained essential oils, is to put a little powdered bichromate of potash in the bottle, then as much in bulk of concentrated sulphuric acid. Let it run well round, and then let it stand till the organic particles are carbonized, or turned black. Add a little water, shake well, and rinse out.

THE negative plates on paper, newly invented by Mr. Sandtner, consist of ordinary glass plates, having a sheet of very thin paper on one of their surfaces. This paper, upon one of its sides, is prepared so as to adhere to the plate by the complete exclusion of air and water; this gives to the glass a mat appearance. The paper forms a support for the collodion, which receives the image in the ordinary manner. As soon as the image is finished, the paper is cut all around, and the negative is detached from the glass.

GERMAN CORRESPONDENCE.

Stas's Researches on the Different Conditions of Bromide of Silver—Action of Sensitizers upon Gelatin-emulsion Plates—Monckhoven's Formula for making Gelatin Emulsions—Kroh's Rapid Process—Effects of Ammonia upon Collodion and Gelatin Emulsions—Comparative Proportion of Sensitiveness of Wet Plates and Albumen Paper—The Electric Light in Portrait Photography—The Cost of the Electric Light—The Intensity of the Magnesium Light.

I REPORTED at a former date that Stas observed six different conditions of the brome-silver, and the following appear to be of interest to the photographer: 1, the flocky brome-silver; 2, the powdery brome-silver; and 3, the granulous brome-silver; which three kinds are subdivided again by Stas according to color.

Flocky brome-silver is obtained, according to Stas, by treating in the cold a solu-

tion of nitrate of silver of 1 per cent., with a solution of brome-kalium of 1 per cent. The caseous precipitation is quite white when an excess of silver is used; with an excess of brome-kalium, however, it is of a deep yellow color.

The white and yellow flakes are soon decomposed if the liquid is neutral, and the same is shaken up, but they are decomposed slowly when the liquid is acid.

This communication explains the fact stated in the *British Journal of Photography*, namely, that brome-silver precipitated according to Abney's method with nitric acid, does not work in the emulsion so well as when the nitric acid is entirely eschewed, for the latter palpably hinders, according to Stas, the subtle distribution of the brome-silver.

The yellow as well as the white, flaky brome-silver blackens rapidly in diffused light.

The powdery brome-silver is obtained, according to Stas, by shaking up the flaky brome-silver violently with water, and it is quickly formed, when the flakes have been precipitated from a neutral solution, and slowly when from an acid solution. Mixed with water it forms a pap, which retains the water very tenaciously, and in this pappy condition it is less influenced by the light than the white flaky brome-silver. Dried and warmed it assumes an intense yellow color. The by far most interesting modification, however, of the brome-silver is the granulous.

Stas says about it: "When flaky or powdery brome-silver, mixed with water, is poured into boiling water, it is transformed instantaneously into a fine dust of extreme softness, which is the granulous brome-silver. It is produced in a direct way by pouring into a boiling solution of nitrate of silver, 1:1000, a sufficient quantity of a boiling, very much diluted solution of bromide of ammonium.

"The granulous dust obtained from the flaky brome-silver is of a dull yellow-white color, while the one obtained from powdery brome-silver, or from very diluted solutions, has a brilliant yellow-white color." When kept boiling for days (renewing always the water), the brome-silver is distributed more

and more till at last it remains suspended in the water, and makes it milky. In this condition the brome-silver shows a brilliant reflex, and settles only after a very long time; after pouring off the liquid, it appears pearly white. When brought in contact with a concentrated solution of bromide of ammonium, the pearly white brome-silver becomes instantaneously intensively yellow. The dull and the brilliant yellow granules, as well as the pearly white, represent the most sensitive bodies to light I know of.

"In order to blacken them, it is sufficient to boil them two or three seconds in a glass retort, in the pale blue flame of a benzine-lamp.

"For these reasons it is necessary to conduct the experiments with this body with the utmost caution. The experiments must be made in the dark, and the vessels to be guarded with metal sheets.

"In melting, the pearly white brome-silver is changed to the condition of the pure, intensively yellow."

Many a reader will be startled by the surprising analogies between the old observations by Stas, and the recent methods to make highly sensitive emulsion. With Stas, day-long boiling; here, emulsification, by keeping day-long in a liquid state in the warm. The effects of the same is pointed out plainly through the experiments which Stas made, before anybody thought of emulsification. It is the transition of the brome-silver into the finely distributed so-called granulous modification, and before the extreme sensitiveness of the modern gelatin plates was even dreamed of, Stas observed already that brome-silver in this condition possesses a sensitiveness to light, totally eclipsing all other bodies in this respect. The dull blue flame of a Bunsen burner blackens it in two or three seconds.

This interesting observation serves to explain the sensitiveness of the gelatin plates—yes, Stas even unconsciously indicated how to produce highly sensitive plates. Prepare after Stas's method granulous brome-silver, and distribute the same in a solution of gelatin. Of course, some drawbacks are unavoidable in the practical exercise of these experiments, which, although they do not irritate the experimentist, they are never-

theless more or less annoying to the technologist, in working the process.

In how far other circumstances contribute to influence the formation of the different modifications of brome-silver, Monckhoven has shown already with his investigations. It is sure that gelatin influences the formation of these sensitive modifications of brome-silver. It will appear that gelatin causes, in the beginning, the formation of powdery brome-silver, which, through prolonged emulsification, becomes granulous. Monckhoven refers only to two kinds of brome-silver, the white and the green, which latter seems to be identical with the yellow granulous of Stas.

It is remarkable that the granulous brome-silver is dissolved in water in a marked degree. One million grammes boiling water dissolves three and a half grammes granulous brome-silver; and it is in fact possible to observe the development of the soluble granulous brome-silver in the gelatin emulsion during the emulsification. I prepared a gelatin emulsion with an excess of bromide of ammonium, and it was entirely tasteless. After two days of emulsification, however, it had the metallic taste of dissolved silver salts, which proved that through the emulsification, granulous soluble brome-silver had been formed.

Of late I have experimented on the behavior of sensitizers in regard to brome-silver gelatin plates. It is well known that collodion emulsions, which have been prepared with an excess of bromide of ammonium, are rendered considerably more sensitive through sensitizing with, for example, pyrogallie acid, tannin, morphia, nitrate of silver, etc.; and it would therefore appear that these sensitizers should exert a similar influence upon gelatin plates. Such is not the case, however. I poured solutions of pyrogallie and morphia over gelatin plates, leaving them dry afterwards, without thereby increasing their sensitiveness. Also immersing in a solution of silver, and drying, produced no increased sensitiveness; which may perhaps be explained by the fact that gelatin plates are not so easily penetrated by chemicals. By mixing pyrogallie acid with gelatin emulsion, I obtained, in fact, plates which were more sensitive than

those without pyrogallic acid; but it is to be shown yet whether, through this manipulation, the chemical effectiveness of the light had in reality been influenced, or whether simply the development had been accelerated. It appears from this, that in every respect, the relative bearings of the gelatin plates differ from those of the collodion plates.

We stand here before an enigma, and have to recommence our researches. It is fortunate that hereby the practical working of the new process is not materially hampered. The overcast days, which begin now to appear, gradually force the photographer to have recourse to the gelatin plate, which is mostly imported from England, Wrattan & Wainwright's plates being the most sensitive plates I know, so that I use the same to much advantage for photographing phenomena showing feeble light, such as the spectra on Geissler's tubes.

To prepare the emulsion for their own use is only undertaken by a few. Monckhoven publishes now a new recipe for it, in which he makes use of the peculiar effect of ammonia. He observes, first,

"If a solution of gelatin is treated with some bromide of ammonium, and then with some nitrate of silver, the liquid appears wheyish, yet almost transparent; but, by adding ammonium, the liquid is disturbed at once, and becomes untransparent; and, according to Monckhoven, the granulous, highly sensitive modification of bromesilver is formed, so that it becomes unnecessary to keep the emulsion hot for a long while." Here is Monckhoven's recipe:

Take 10 grammes Nelson's gelatin, No. 1, and 8 grammes dry bromide of ammonium; pour on 250 grammes water, and let it rest a quarter of an hour. The whole is then warmed by placing the vessel in hot water, and, after every particle has been dissolved, a solution of 12 grammes of nitrate of silver dissolved in 50 cubic inches water is added drop by drop, while shaking, when 5 cubic inches ammonia are added yet.

This emulsion may be used at once, but by keeping it warm during twenty-four hours, its sensitiveness is materially in-

creased. The emulsion is now poured into a glass vessel, which is placed in cold water until the whole has been congealed; after which the congealed emulsion is put in a linen bag, and placed in cold water. The isolated particles of the emulsion are then gathered up in a hair sieve, and washed in water, which is to be renewed three times, but each time left two hours in contact with the emulsion.

I have tried the effect of the ammonia in this way, and have found that it offers some advantage. Emulsion prepared with ammonia has about double the sensitiveness of the emulsion prepared without the same.

The mystery which till recently enveloped the private process of Mr. Karl Kroh, of Vienna, has been dispelled at last, the gentleman having succeeded in finding 200 subscribers at 50 florins each (50 florins equal to about \$21); and although each subscriber had been individually pledged not to reveal the secret, it nevertheless did not take long in finding its way to the public at large.

The peculiar features of his process consist in adding isinglass, or gelatin, to the collodion.

He dissolves, warm, 3 grammes gelatin in 4 grammes iodine-potassium, and 3 grammes brome-ammonia, 35 grammes water, and 70 (20?) grammes alcohol, and filters. Of this solution he puts 8.75 grammes to 1 kilogramme iodine-collodion, adding yet 8 to 10 drops of acetic ether, which causes the collodion to become turbid. Shake well in order to dissolve any possibly secreted matter. If the turbidness is only trifling it need not be minded.

Silver Bath.—25 grammes silver salt, 420 grammes water, 2 drops nitric acid, 8 to 10 drops of a solution of 60 grammes iodine-potassa in 20 (70?) grammes water. The photographer needs three silver baths, and must change the bath every day. If twenty plates are made a day, even six baths are necessary, and have to be changed every half day. Before immersing in the silver bath the collodion must be dried pretty well.

"Six baths," you will say; "that is

much!" So it is; but you will need also two developers.

Developer No. 1.

Water, . . .	2000 grammes.
Iron, . . .	105 "
Acetic Acid, . . .	105 "
Alcohol, . . .	140 "

Developer No. 2.

Water, . . .	2100 grammes.
Iron, . . .	175 (125 ?) gr.
Radical Vinegar, . . .	105 grammes.
Absolute Alcohol, . . .	140 "
Oxalic Acid, . . .	0.36 "

Solution No. 1 is prepared cold, but No. 2 warm. Developing is begun with No. 1, and when the highest lights are brought out, No. 2 is used, which brings out the shades.

As several American photographers have written to me requesting information about the process in question, I send you herewith the receipts, and shake hands with those who did *not* buy the process. Only half of the time of exposure is saved by it, and often, also, only one-fourth of it. Dr. Szekely, of Vienna, declared before the Photographic Society there that he had given the process a trial, but is satisfied to work with his old usual process, which he prefers, in fact. As said before, the peculiarity of the process is in the combination of the gelatin with collodion. Many a photographic chemist had the idea already to try to impart the high sensitiveness belonging to the gelatin plates also to the collodion dry plates. As I reported to you at a former date, Monckhoven ascribes the high sensitiveness of the gelatin plates to the fact that the brome-silver they contain is in the green modification. He showed further that this green modification can be obtained by adding ammonia to the gelatin.

Eder and Toth thereupon tried the effect of adding ammonia, recommended by Monckhoven, in regard to gelatin emulsion, also upon collodion emulsion, which had been precipitated with an excess of brome-salt; and, in fact, by adding 3 to 5 per cent. ammonia, the white brome-silver was transformed into the green modification, and Monckhoven's observation was thereby corroborated. But these green emulsions

did not show at all the expected sensitiveness of the gelatin emulsions, so that it seems to be an open question yet whether it is correct to ascribe the high sensitiveness of the gelatin emulsions in particular to the green modification of the brome-silver.

The *British Journal* writes that the addition of ammonia, recommended by Monckhoven, did not produce the expected results in special experiments made in this connection; the plates obtained showed no intensity, and were much inclined to come off from the glass.

I tried the experiment of adding ammonia in the following way: I divided a freshly-prepared lot of gelatin emulsion in two halves, and added to one of them 5 per cent. ammonia. Then I emulsified both halves five hours, left them congeal, washed them in common, and prepared then the plates with them. The emulsion to which ammonia had been added, produced plates with twice as much sensitiveness as the others. The plates showed only a little bit less intensity than those prepared with the common emulsion.

The other day I had need of a gelatin plate in order to solve a question which, till now, was never thoroughly tested. The question is: How many times greater is the sensitiveness of the iodine-silver collodion plate in relation to the sensitiveness of the common albumen paper. My friend Hartman once advanced the opinion that the wet collodion plate at its best ought to be 500,000 times more sensitive than the albumen paper, as Muybridge photographed horses in $\frac{1}{100000}$ of a second, while even in the best light 25 minutes are necessary to copy a negative.

"Of course," he adds, "it must be considered that Muybridge's pictures were yet short exposed," and on the other side light is lost in going through the negative; but all these objections taken in consideration, it yet would seem to him that the relation 1:500,000 was not too high. It is, however, to be taken into account, that through the lens a considerable concentration of the light is produced, and in so far those observations do not appear to be sufficiently conclusive. To sift the matter to the bottom, I experimented with albumen paper and a

sensitive gelatin plate in the following way :

I lighted both the paper and the plate together under the same negative with magnesium light, till I obtained on the albumen paper a strong direct print, and on the plate a corresponding copy by the use of developing. I found through the experiment that for the direct copy upon albumen paper, 250 centimetres magnesium-band had to be burned in the lamp, with a reflector, at a distance of 9 centimetres from the negative. In order, however, to obtain a fully exposed copy from the same negative upon dry plates, it sufficed, on an average taken from several experiments, to burn 1 centimetre of wire, without reflector, at a distance of 36 centimetres. The relation of the magnesium used is therefore 1 : 250. We have, however, to take yet into consideration that for the direct copy upon albumen the reflector was used. The latter raises the effect of the wire, as established by separate experiments with the photometer, to three times its simple strength, and therefore, without a reflector, instead of 250 centimetres, 750 centimetres would have been necessary. Furthermore, the 250 centimetres have been burned at a distance of 9 centimetres, while at the second experiment with the gelatin plate the distance was 36 centimetres, that is, 4 times as large; and, as at such a distance the strength of the light is 16 times less than at the first distance, 16 times as much wire, viz., 16 multiplied by 750 equals 12,000 centimetres, would have been required at a distance of 36 centimetres; or in other words, the gelatin plates used were 12,000 (say 12,000) times more sensitive than the albumen paper. The fact was also established that said gelatin plates were pretty nearly 5 times as sensitive as wet plates, which goes to prove that common wet plates are about 2500 times more sensitive than albumen paper under the above-named circumstances.

The electric light now finds more and more favor. In Berlin, it is true, it is, so far, used only for photographic enlargements, but Liebert, in Paris, has introduced it also in the portrait studio; and it appears to be fashionable now, in Paris and London, to get photographed at night.

It is naturally very handy for a lady in full dress, ready for a ball or soirée, to have her picture taken in her splendor then and there, without going to the same drudgery again to make her toilet during the day, in order to get photographed. It is reported that in one night alone, when a certain fancy ball was given at London, not less than one hundred and twenty photographs were taken. In case this whim should find favor in America too, an increased interest in the application of electric light may be counted upon.

According to Nida, the cost of fixing up the electric light for Liebert amounted to 12,000 marks, or about \$2880. The light does not fall direct upon the person, but upon a large white reflecting screen, like Kurtz's conical background, which can be moved, and admits of appropriate dispersion of light, so that glaring light and shades are avoided. The time of exposure is about one-third longer than in daytime: nevertheless, it is possible to make instantaneous pictures with gelatin plates. In regard to the expenses contingent to the employment of electric light, I have some very interesting details at hand.

The world-famed firm of Siemens & Halske have supplied, during four months, the large establishment of the "Passage" with electric light, using a new system of carbon cones, which is one-third cheaper than the Jablochhoff candles used in Paris. Siemens used eleven flames, each representing the strength of light of 200 candles, or together, 2200 candles. The expenses, including wages of machinist, costs for oil, fuel, etc., amounted to four reichsmark, equal to ninety-six cents, per hour.

Finding that the merits of artificial light is largely discussed in larger circles, I thought it of interest to make experiments in regard to the relative intensity of the electric and the magnesium lights.

All the photographic experiments published thus far in regard to the intensity of the magnesium light have mostly been made with a magnesium lamp, furnished with a reflector. The auxiliary use of a reflector is tantamount to a considerable increase of the effects, and a comparison with the results of experiments with electric light is

only feasible when the latter one is made with exactly the same reflectors. If this is not done, the results cannot be compared directly.

To determine the effect of the reflector, several experiments with burning magnesium wire have been made. The chemical intensity of the same was determined with my chrome-paper photometer, which was placed exactly seven inches apart from the burning magnesium wire; and it appeared, from several experiments, that without a reflector, $4\frac{1}{2}$ metres equal to $4\frac{1}{2}$ grammes of wire had to be burned to make the photometer rise 8°. With a reflector, however, 1.5 grammes of wire were sufficient to produce the same effect; and it is therefore patent that the effect of the magnesium lamp without a reflector, stands to that of a lamp with a reflector in a relation of 1 : 3.

In comparing the magnesium light without reflector with electric light without reflector, the following data were obtained :

A Siemens dynamo-electrical machine of 800 candles caused the photometer to rise 15 per cent. in 7 minutes at a distance of 7 inches.

Now the chemical quantity of light required to cause the photometer to rise 15 per cent. is 5.3 times as great as the quantity of light necessary to reach the number 8, consequently the effect of 7 minutes of the dynamo-electric light of 800 candles corresponds to the effect of 23.8 grammes of magnesium wire.

As 10 grammes of magnesium wire cost 8 reichsmark, it is plain that the expenses for the magnesium light are much higher than the cost of the electric light.

The light of an electrical battery of 50 elements, after Bunsen, did not come up to the dynamo-electrical light.

It required 11 minutes, at a distance of 7 inches, to cause the photometer to rise 15 per cent., and it stands therefore in relation to the dynamo-electrical light like 7 : 11.

Very truly yours,

H. VOGEL.

BERLIN, November 24th, 1879.

THE best work on photographic chemistry, lighting, and posing, is Dr. Vogel's *Hand-book of Photography*. Price, \$3.50, post-paid.

SOCIETY GOSSIP.

PHOTOGRAPHIC SOCIETY OF PHILADELPHIA.—Stated meeting held Thursday evening, November 6th, 1879.

Mr. Edward Tilghman was elected an honorary member of the Society.

The following gentlemen were elected to serve as officers for the ensuing year :

President.—Mr. Joseph W. Bates.

Vice-Presidents.—Messrs. George W. Hewitt and John Carbutt.

Treasurer.—S. Fisher Corlies.

Recording Secretary.—D. Anson Partidge.

Corresponding Secretary.—Dr. Carl Seiler.

Mr. Clemons exhibited some prints which had been made on paper yellow with age. By the employment of his method of treatment with a blue dye, the objectionable tint had been almost entirely removed.

Mr. Zugate, who was present during the evening, showed a number of very fine samples of platinotype prints.

Mr. Zugate said that this was the most simple process of printing with which he was acquainted, and that the cost was moderate. Adjourned.

Stated meeting held Thursday evening, December 4th; the President in the chair.

Dr. Seiler suggested that the members of the Exchange Club exchange their portraits in addition to the usual print. This was favorably received by the members.

A motion to purchase a gas lantern for the use of the Society was laid on the table.

Mr. Carbutt exhibited some gelatin negatives, and prints from them. These plates were prepared by Wrattan & Wainwright, of London, some twelve months since. After keeping six months they were exposed, and were not developed until nearly six months later. The result showed the excellent keeping qualities of these plates.

A very complete and portable field outfit for working 5 x 8 dry plates, made by the Scovill Manufacturing Company of New York, was shown by Mr. McCollin.

Stated meeting December 18th; the President in the chair.

Mr. Carbutt exhibited two gelatin negatives made on his commercial plates. The

negatives had received exposures of five and three seconds respectively. The one made with the shorter exposure, however, was the better negative.

In speaking of the process, Mr. Carbutt said that he no longer experienced any trouble from films filling, and thought that if any tendency to this fault showed itself, a brief immersion in a two-grain solution of chrome-alum would prove a perfect cure.

Friday, January 2d, 1880, was fixed for the next meeting.

D. ANSON PARTRIDGE,
Secretary.

OLD THINGS IN NEW DRESS.

BY THE LATE JOHN L. GIBON.

To Remove Silver Stains from the Hands or Linen without the Use of Cyanide.—"The following suggestion may be old to the veterans in photography, but to some beginners and amateurs it may prove acceptable. Cyanide was for years the agent for removing silver stains from the operator's hands. Many accidents, and some with very serious results, were caused by the too free or careless use of this deadly poison. These simple directions are perfectly safe and effective. First wash the stains thoroughly, using no soap; then rub well with tincture of iodine; and finish with concentrated liquid ammonia; wash again without soap, and the stains will have all disappeared."

Remedies for Poisoning from Cyanide of Potassium.—"Whenever an accident occurs from imprudent use of cyanide, such as sometimes happens from an operator placing his chapped or otherwise broken hands into cyanide solution, the first thing to be done in case of giddiness or faintness, is to wash the wound in a saturated solution of chlorine at an ordinary temperature. The patient should also immediately swallow two or three grammes of the same solution in a glass of water, without waiting to put sugar in it.

"He should be at once put to bed, or on the nearest couch, and covered up with warm blankets, hot-water bottles being placed at his feet and along the whole length of his body.

"The windows are opened everywhere

to secure a good circulation of outdoor air, for plenty of pure air is as necessary as warmth in such cases. Tea or coffee is now prepared, and the patient receives a cup with ten drops of laudanum and one or two spoonfuls of any alcoholic liquor, such as rum or brandy. This dose is repeated three or four times at intervals of from fifteen to thirty minutes.

"In cases where the symptoms are very severe, or where the poison has been taken internally, in addition to the above precautions, the dose of chlorine should be five instead of two or three grammes.

"The patient should be allowed to inhale frequently from a vessel containing chlorine water. Every five minutes a teaspoonful of the following potion should be administered :

Chlorine Water,	5 grammes.
Chlorohydrate of Ammonia,	2 "
Sugar Water,	250 "

As soon as the patient is better, the laudanum is left out of the tea, and the potion given only once in fifteen minutes.

"It is well to have the above potion and the solution of chlorine always on hand, and labelled with directions for use. A case of such poisoning may not occur in a gallery once in a lifetime, but still if it *does* occur a valuable life may be saved by prompt use of the above remedies, and on the delay of a minute vital issues may depend."

To Keep Plates Moist for Outdoor Exposure.—"Here is an old but somewhat neglected method for preventing the plates from drying before exposure. It is simply this: place a perfectly clean glass plate just in front of the prepared plate when about to make a long exposure; this prevents rapid evaporation, and will keep a plate moist for an hour. The front plate should be the same size as the collodionized plate; and for those who often are called upon to make outdoor negatives, it would be well to have the plate-holder fitted up with such a protector, movable, of course."

Some Practical Hints.—"If your collodion is getting thin and rotten, add a little more ether; it will toughen it."

"Keep a weak solution of iron, in a clean

bottle, ready to take in case you accidentally get cyanide in your mouth. It will prevent your being poisoned."

"When you boil down your bath, have a good circulation of air through the room. The fumes of the evaporation contain acid, and are very poisonous to the lungs."

"Try at all times to do better work than your neighbor. But, at the same time, keep on friendly terms with all; do not be afraid to communicate any good little dodges to your competitors."

"Above all things, do not try to exalt your own work by decrying another's. Such a plan would react injuriously upon yourself."

On Solar Printing.—"We have found that the cleanest prints are produced by direct printing, but this plan is frequently very tedious.

"There are not many days in the year when we have the uninterrupted beams of the sun for several hours together. It is in consequence very annoying to start with sunshine, and then have to wait an hour because of the sudden arrival of an express train of heavy clouds.

"Our favorite plan is to print by development; there is a charm about it that far surpasses all the many enchantments of photography. The paper is pinned upon the easel, the sun is turned on much after the fashion of turning on gas, and directly afterwards a dim staining of the paper takes place, gradually assuming form, and appearing, in a few seconds, a ghost outline.

"The paper is taken down, the developing solution poured on, and rapidly spread by means of a strip of Canton flannel, and gradually there arises out of the surface of the paper a distinct image, which goes on increasing in intensity until all the roundness and solidity of life is apparent.

"We never tire of this part of the process. The rising up of these large images from the blank surface of the paper is so like magic, that we feel it fortunate we produce these wonders in the reign of Victoria instead of Elizabeth, for we doubt not we should have been rewarded for our pains by a warm reception.

"During the winter months we found

that the more bromide we employed up to a certain point the more sensitive the paper became.

"The salting solution we then used was prepared as follows:

Chloride of Ammonium, .	6 grains.
Bromide of Potassium, .	9 "
Gelatin,	4 "
Water,	1 ounce.

"With paper thus prepared we obtained pictures in three minutes with average sunlight.

"The formula which, after many experiments, we think the best, is

Chloride of Magnesium, .	4½ grains.
Bromide of Potassium, .	7½ "
Gelatin,	4 "
Water,	1 ounce.

"With this solution a picture has been produced in three seconds. We find that the bromide has a tendency to produce green in the tone of the finished print in some papers. The tint is, however, by no means disagreeable.

"The proportions of the salt play a very important part in the tone of the picture. The following solution will give increased warmth and richness to the tones:

Chloride of Ammonium, .	9 grains.
Bromide of Potassium, .	3 "
Water,	1 ounce.

We salted this paper with the following preparation:

Chloride of Ammonium, .	9 grains.
Arrowroot,	4 "
Water,	1 ounce.

Sensitized with silver ninety grains to the ounce, and exposed for twenty minutes. It developed very slowly, and when finished was by no means over-exposed.

"We brush on all our solutions except the hypo. We use several large plates of thick glass, keeping each for its especial use. The salting solution is brushed on and allowed to remain until the paper lays flat, which, with most paper, is about three minutes. Brush on the silver with Canton flannel, reserving the saturated piece to darken any of the shadows that may need it during development. When we develop we turn up the edges of the print, so as to form a tray, and pour on a saturated solu-

tion of gallic acid, with a few drops of acetic acid added; the prints develop cleaner when acetic acid is used.

"To wash away the gallic acid we use a large quantity of water. This is absolutely necessary, otherwise stains would be produced which would not be removed by the fixing. The fixing solution is of the usual strength, and does not appear to alter the color of the print. All the operations except the salting must be performed in the dark-room."

(To be continued.)

MEMORIES OF THE PAST.

BY S. L. PLATT.

How many times we are questioned in regard to our profession; and how many times we find some difficult to answer. It should not be so. It would be much better for our business if we should inform ourselves in regard to the commencement and progress of the art. Let us try a little.

In the year 1777 Schule, a Swedish chemist, observed the action of the sun on chloride of silver, and in 1780 Prof. Charles, of Paris, obtained an image of his assistant on a screen covered with paper dipped in chloride of silver. This was done by placing the sitter in the rays of light that passed through a hole in the door and formed a shadow on the screen; so the first impression was only blank paper, while the background was blackened.

In 1815, Niépce, a French officer, became interested in the art, and experimented on what is now known as *lithography*. The agents he employed for obtaining the pictures are not known. He gave it the name of *heliography*. In 1826 he adopted the use of a lens, and fixed his image with essence of lavender, which was obtained on bitumen. This was a very slow process, requiring nearly ten hours' exposure to produce a picture; the process was, therefore, considered very imperfect. The idea of employing a developer does not appear to have entered into his mind. It is to Daguerre that we owe this suggestion, and to him must be conceded the chief glory of having created the art of photography.

In 1825, while Niépce was engaged in ex-

perimenting, an unknown person, poorly clad, and in ill-health, entered the shop of Chevalier, the celebrated optician of Paris, and asked the price of a camera which had just been finished. The answer was returned in an off-hand manner, which appeared to affect the stranger. Chevalier asked for what purpose he wished such a valuable instrument, on which he replied, "With such an objective he could take pictures of natural objects;" and then exhibited what we now call a positive print, of a landscape. Chevalier was much excited over the production. The inventor left with him a bottle of liquid by which he claimed to have obtained the result, and was never afterwards heard from, nor could the faintest clue to his identity be obtained. Chevalier was unable to obtain like results, and sent the bottle to Daguerre, a sign painter, born near Paris in 1787. His early education was neglected, and he was left to follow his own genius. He became a scene painter in the theatres, and being a good dancer, often took part in the ballet.

He assisted Banton in inventing the diorama, which proved a great success. While studying illumination for his diorama, he made great use of the camera obscura, and was much delighted with the reflected pictures. He often asked, "Is it not possible to fix these pictures on a plate, that they can be retained?" He had attended Prof. Charles' lectures, and seen his experiments on chloride of silver, and the idea took full possession of him that by some similar process the picture of the camera could be reproduced in permanent form. He had by accident left a silver spoon on a paper saturated with iodine, and the next day discovered a perfect image of the spoon on the paper. He immediately substituted iodide of silver for the bitumen. A plate of silver was put in a box, with a few crystals of iodine, and was thus rendered sensitive in the dark, and served to receive the image of the camera obscura.

He informed Niépce of the discovery in 1831. Niépce died in 1833, but Daguerre continued his experiments, taking the son of Niépce as partner. For a long time they were unable to fix the impression obtained on the silver plate, until by accident one of

the plates was left on a shelf near an open bottle of mercury. The fumes attacked the plate and fixed the picture.

Here was then the complete discovery of the daguerreotype. The discoverer, being short of funds, sold the secret to the government for ten thousand francs, giving four thousand francs to the son of Niépce. The art was given to the Academies of Science August 10th, 1839, which excited the people of Paris; all were anxious to learn the wonderful story of how an almost instantaneous picture of natural objects could be obtained in a permanent form, far more accurate than any artist could paint.

It did not take long for the news of the discovery to travel to all parts of the world. Professor Draper, of New York, repeated the experiments, and added the microscopic picture and solar spectrum.

Daguerre died July 10th, 1851, at the age of sixty-four years.

In 1802, Sir H. Davy and Professor Wedgwood made numerous attempts to obtain an image on paper. The length of exposure being much longer, it was finally dropped, until, in 1834, at that time Fox Talbot, antecedent to the discovery of the daguerreotype, commenced a series of experiments with paper sensitized with iodide of silver; after the exposure in the camera obscura it required developing to bring the image into view. So to *him* we are indebted for the discovery of gallic acid as a developer, placing him side by side with Daguerre in the order of precedence in contributing to the final success of photography.

When Talbot learned of the famous discoveries of Daguerre in France, he sent to the London Society an account of his experiments. In 1839 an article was published containing a full description of what he had done. He gave the name of colotype to the new process. On the 7th of June, 1841, he gave the Paris Academy of Science another process on paper, which was laid by until 1847, when Mr. Bayard, a Frenchman, succeeded in obtaining pictures by the direct action of the sun on sensitized paper; having been led to make the experiment in a singular way, by cutting his initials in paper and wrapping it around a peach, leaving the fruit exposed to the sun. The action of the

light transferred the initials to the fruit. The process was similar to the one in use by Talbot. So, up to this time, a sheet of paper sensitized in a solution of *iodide* or *bromide* of silver, and placed in the rays of a camera, would produce a picture.

Next comes the *fixing* agent, hyposulphite of soda, which dissolves out all the salts of silver that have not been acted upon by light, and leaves the image intact. A picture is thus obtained in which the lights of the original are in black and the shades in white. It is an inverted image or negative. If this be placed on a sensitive piece of paper and placed in the sun, it will produce a positive, which is worked in like manner; the negative will serve for the printing of an indefinite number. The only drawback to this was the coarseness of the paper.

In 1845 Saint Victor produced a glass negative by dissolving iodide of potassium in albumen, and coating the glass, which, when dry, was immersed in a bath of nitrate of silver, and afterwards exposed in the camera.

The revolution of 1848 put an end to further progress, as the mob entered his laboratory and destroyed all his valuables, leaving no trace of what had been accomplished.

In 1855 Victor commenced a new line of experiments, endeavoring to photograph in colors.

In 1846 Schoenheim, by the action of sulphuric and nitric acids on cotton, produced gun-cotton.

In 1848 Dr. Maynard discovered that gun-cotton was soluble in alcohol and ether, and gave it the name of *collodion*. He intended it for medical purposes.

In 1851 Le Gray employed collodion for photographing on glass. In 1852 Archer, a photographer in London, published the process, and in 1855 Mr. A. Poitevin discovered the action of potash on gelatin. Upon this is based the various modern processes, *i. e.*, photo-engraving, photo-lithography, Woodburytype, Albertype, etc.

PHOTOGRAPHIC BOOK SALES are largely on the increase with us. It is a good sign. Read all the authorities. See our book-list, and send for confidential circular.

AN ESSAY ON THE EDUCATION OF THE EYE

WITH REFERENCE TO PAINTING.

BY JOHN BURNET, F.R.S.

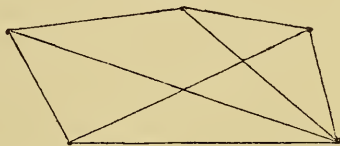
IN a country so largely connected with manufactures as this is, we cannot but wonder why the education of the eye has not been more generally cultivated; observing, as is also the case with the ear, that its education in after life rarely gives the possessor those advantages which result from a proper direction having been given in youth: nor do I see why drawing should not accompany the elements of reading and writing, the complicated forms of the letters in many languages presenting a more serious obstacle than what is required in the rudiments of drawing; and I have no doubt but that a very short time would be sufficient to enable a scholar to draw objects with tolerable correctness. Without this education, not only are the most valuable advantages often lost, but the mind is deprived of one of its chief sources of correct information, and the hand remains in a manner paralyzed, and unable to record what the eye takes cognizance of; whereas when they advance in mutual contact through a course of early instruction this difficulty is overcome. This ready execution of the hand is to be acquired only by constant practice; for however readily the eye may perceive the form of an object, the power of delineating it on the paper or canvas is where the apparent difficulty lies, it is here where its correctness is put to the test. How much constant practice perfects this chain of communication between the eye and the hand, may be proved by the facility with which a person acquires the power of writing in the dark, or with his eyes shut. This quick communication, however, is not to be purchased at the expense of correctness, which ought to be the greatest consideration; for if the eye, or ear, falls into a loose, imperfect method of study, the student finds the greatest difficulty in getting rid of such unprofitable groundwork. In advocating the advantages of this branch of education, it is not my province to raise up chimeras, or what might be considered sufficient reasons for deferring it. Those who have the instruction of youth

intrusted to them, I am confident would find it rather an assistance, as it might be given either as an amusement or as a reward of merit; and, in order to put it in the power of any master to instruct, I shall endeavor to proceed in the simplest manner, and with as few diagrams as the subject renders necessary.

MEASUREMENT.

To teach the eye to measure the distance between one object and another, ought to be the first proceeding; the forms of the lines which bound these spaces, the shapes contained or excluded by such lines ought to follow, for as the eye must have something tangible to work upon, it ought to be simple and evident. I should, therefore, commence by a series of dots or points, first two, then three, four, and five; also the angles

Fig. 1.



made by drawing lines from each several point. A pair of compasses will enable any one to compare their correctness with the original, for until a pupil can accomplish pretty correctly these preliminaries, it is useless to hasten to more complicated matters.

FORM.

All forms containing more or less portions of a triangle, square, or circle, the eye must be taught to comprehend and imitate such objects in their simple forms, in order to fit it for the purpose of seeing such qualities when mixed and combined with more complicated figures.

Fig. 2.



Fig. 3.

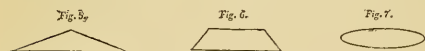


Fig. 4.



I would now recommend these forms to be cut out in paper, and viewed in various situations, being set upright, and also viewed in a horizontal position, that the eye may

become thoroughly acquainted with the figures in all their variety of shapes, and with the causes of their alterations in form.



I also recommend the pupil to draw from a cube and a ball, that the eye may become early accustomed to draw from the real objects, in place of flat surfaces, which will give him a power in drawing from nature unattainable by any other method.

PERSPECTIVE.

Many have been deterred from attempting to learn drawing from the dread of encountering so formidable a department of the art as perspective; whereas, if it is stripped of its geometrical and mathematical intricacies, it will be found a very simple matter, and easy of comprehension. Perspective, as the word denotes (being a compound of the Latin words *per*, through, and *specto*, to view), is the art of drawing the several objects as they appear when traced upon a glass, or transparent medium; the art of drawing in perspective, therefore, is nothing more than representing the various objects subject to those laws which regulate their appearance in nature.

LINES.

All lines are subject to an alteration in their appearance, except two, a perpendicular line and a horizontal one; and lines are more or less diminished in length according as they depart from the parallel of the base line; for example, if a person holds a pen or stick parallel with the eyes, and gradually turns it round, he will see it gradually become shorter, until it assumes a mere spot when it is placed with the point directly towards the eye, as it then covers what is termed the *point of sight*, being a point immediately opposite the observer's eye, and upon the horizontal line, which is always of the height of the eyes of the spectator; and as it is turned round it will describe innumerable points along the whole line; these are termed *accidental points*, and vary ac-

cording as the lines run more or less at right angles from the base line. Lines also vary according as they are situated above or below the observer's eye; for instance, if a book is held up horizontally before the eye, the under cover will be seen when held above, and the lines on its sides appear to run down

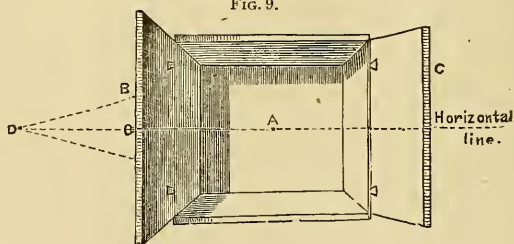
Fig. 8.



to a point on the horizontal line. When underneath the eye, the upper cover will be seen, and the lines describing the sides appear to rise up to the horizontal line. Before proceeding further, for the better understanding the several lines already mentioned, and showing how they are affected, I shall give an explanatory figure.

Fig. 9 represents a cupboard with folding doors: being placed immediately before the eye, the sides appear to rise and descend to the point of sight, A; also the door B, from its being opened at right angles with the base line, while the lines of the door, C, appear to run to the accidental point, D;

Fig. 9.



this point will vary its situation according as the door is more or less opened, which explains what are termed accidental points.

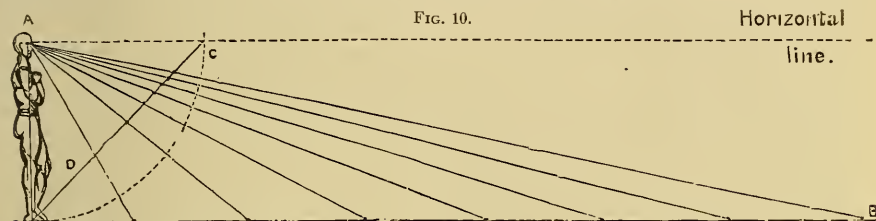
DIMINUTION.

All objects diminish in size as the spectator departs from them, hence two parallel

lines seem to approach each other as they recede from the eye; and this diminution will appear more or less sudden, according as they commence from a near point, or one more removed. For example, if the hand is held near the eye, it will intercept a larger

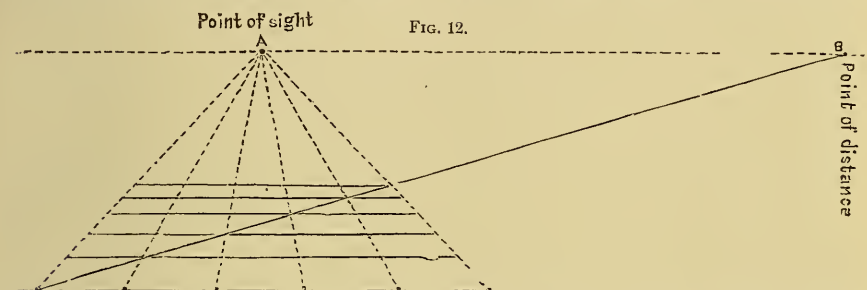
proportions will be as the divisions on D; they will therefore present the appearance as shown in Fig. 11.

When, therefore, objects are commenced too near, they appear out of proportion with the other objects in the work, and though



space than when held out at arm's length. Objects diminish in an increased ratio until removed to a certain distance, when the diminution appears less violent; this may be made apparent by a glance at Fig. 10.

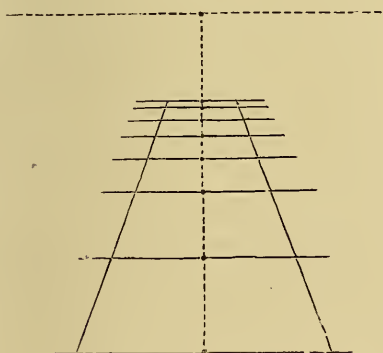
true according to rule, appear false, with regard to their effect upon the eye of the spectator. This is termed violent or sudden perspective, to avoid which a point of distance is chosen that will look agreeable.



Let the line A represent the spectator, and the line B represent a line of pavement, the circular line, C, which cuts through the visual rays as they approach the eye, will show the diminished ratio as the squares

The breadth of the squares being determined by the diagonal line running to the point of distance where it cuts through the lines of the pavement, which run to the point of sight, the farther this point is removed, the more level the ground will appear, as represented in Fig. 12.

FIG. 11.

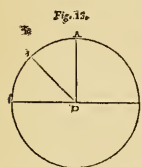


become more distant. And as they have to be represented upon a plain surface, their

ANGLES.

What we have hitherto said more immediately applies to parallel perspective; so named from all the lines which intersect those running to the point of sight being parallel with the base line. When, however, a square, or any cubical form, is viewed at the angle, the two sides will not appear to vanish in the point of sight, but run to two points on the horizontal line, called vanishing points; and this mode of treating the subject is called angular perspective. Now these two points are always at an equal distance from each other, which

is one-fourth of a circle. Therefore if one is determined upon, the other is easily found; for as one departs from the point of sight, the other appears to approach it, as any one may perceive by turning round a sheet of paper, or a book, from a situation where one side is parallel with the base line, until it is viewed upon the angle. The cause of this, perhaps, may be more clearly explained by the following figure.



Suppose the circle to represent the line of the horizon, which is the true representation of it when viewed out at sea, or where no obstruction intercepts it, for then the water coming in contact with the sky, presents a circular horizontal line. If a person, therefore, was placed at D, and looking at the point A, the line c would be parallel with the base, being at right angles with A, and consequently occupying one-fourth of a circle; but if he turned in the direction of B, then A and c would become vanishing points, though still at equal distances upon the horizontal line, and would appear as in Fig. 14.



In a panorama, which is circular canvas, viewed from the centre, this mode of measuring the various points is found to agree perfectly with the natural representation of objects.

(To be continued.)

AN EASY METHOD TO REDUCE SPOILED SILVER BATHS.—If a spoiled silver bath is to be reduced, it is necessary to act first with carbonate of soda upon all free acid, so that the solution reacts somewhat alkaline; then add, while stirring, a strong solution of oxalate of soda (neutral, or somewhat better, alkaline), so long as anything is precipitated (oxalate of silver).

The latter is poured off gently, washed out, left to dry by natural process (if artificially dried the whole salt may decompose under explosion), and then melted with its equal weight of bicarbonate of soda in a capacious Hessian crucible with slowly increasing heat until it gets red-hot at last. The silver rapidly forms a regulus on the bottom of the crucible.—*Wochenblatt.*

OUR PICTURE.

ALMOST six months ago we received from the proprietors of the Bradley & Rulofson gallery in San Francisco, half a dozen fine negatives of the bright little miss, whose airy picture graces our present issue. We should have given this pretty picture to our patrons before, but for the interruption it would have caused in the series we published at the close of our last volume, bearing specially upon the choice and use of accessories.

It loses none of its charm, however, by this delay, and makes a very pretty opening for our seventeenth volume.

And it is, indeed, appropriate enough that an old gray-headed magazine should begin the New Year with just such a picture of brightness and youth as this.

All good photographers love to make pictures of children. They are usually more responsive to his desires when posing them than are older folks as a rule; help him more conscientiously, and do him more full justice in the resulting pictures.

If a photographer wants to succeed with them, however, he must first love them. He must become infused with some of that same feeling which the immortal bard Haydn had, who said to himself, before composing that symphony of his for the children, wilder and sweeter than the carol of a thousand birds:

"Now wake a grander symphony to please,
And move the hearts of such dear ones as these;
And with such instruments their hearts to move
As in their childish habits they approve."

And truly did he confess when done his work of love for the children, as the photographer may also often do:

"No trifler's art. The maxim here unfurl'd
Is please the child and you will please the world."

And just as Haydn used the music of the whistle and the rattle and the drum and the triangle and what-not of childish delights to please them, so the photographer has resort to the same subterfuges. May he in the same way immortalize himself by his work.

And of the little girl who so patiently

submitted to the making of six negatives for our purpose—what?

We know nothing of her little life, but of one thing her sweet picture assures us: She is certainly *not* “the *bad* little girl” told of by another bard:

“Who never would finish her crust.

In vain they besought her,

And patiently taught her,

And told her she must.

Her grandma would coax,

And so would the folks,

And tell her the sinning

Of such a beginning.

But no, she wouldn’t,

She couldn’t, she shouldn’t,

She’d have them to know—

So they might as well go.”

No, no! she is not that, and we thank her heartily for all the pleasure we have

from her “through the eye,” as Mr. Burnet would say, and the lessons we may learn from her splendid picture, in connection with the first instalment from that gentleman’s great *art-poem*.

A HAPPY NEW YEAR!

WE wish that you all may have it. Success in what one works for generally brings happiness; and if photographers would have success, they must and should *read all the publications they can get bearing upon their daily work*. We offer something on *every branch*, and no one need want for information with such a list to draw from. Please refer to it, and note our liberal offer when three books are ordered at one time—and be happy.

Editor's Table.

TESTIMONIALS.—“I have been the recipient of so much good through the *Philadelphia Photographer* and *Mosaics*, that I feel like doing all I can to aid you in the good work you are engaged in—the elevation of the art and the fraternity at large. As your prospectus for 1880 shows, you are advancing in the right direction—art education. I would almost as soon be without some of my apparatus as to be without the journal. As soon as the first of the month comes I am all expectation until the journal is received, and then I am not satisfied until I have devoured its contents, and wish for more. I wish you success in your continued efforts in behalf of the photographer.”—FRANK THOMAS. “As my subscription for 1879 has expired I am obliged to renew it at once. It is too valuable to miss, and I cannot leave my eyes from its pages. It is a great helper to every one, and will help him out of the dark and give him a clear way. Your journal comes to us better every month, and I hope you will gain a rich reward from the fraternity.”—JOSEPH THEIRING. “Inclosed find \$5.50, for which please to send me the *Philadelphia Photographer* for 1880, and Gihon’s *Colorists’ Guide*; also, the *Mosaics* for 1880. As long as I remain in the business, and the *Philadelphia Photographer* continues to be what it is, you can regard me a regular subscriber. I should feel lost indeed

without it.”—H. H. H. LANGILL. “Please find inclosed \$5.00 for the *Philadelphia Photographer*, and *Mosaics* for 1879 and 1880. They are my photographic bread and meat. Can’t do without them as long as I have any money. I wish you great success.”—JAMES E. GAUSE. “I should have ‘played out’ of photography long ago if it had not been for your *Philadelphia Photographer*, and I observe those who fall behind and who fail are not readers of the *Philadelphia Photographer*.”—F. M. SPENCER. “I have been a constant reader of the *Philadelphia Photographer* for the past sixteen months, and looking back over that time I now consider it one of the best investments I have made. About the time I commenced to read your journal I had my mind about made up to invest in liquid lightning. But as the first journal I received contained some of the thunder from parties whom the lightning had struck, I thought best to wait awhile. And in the meantime, by using some of the good things furnished in your journal, and a little more brains with my own formulæ, I found I did not need any lightning, and so saved more than the \$5.00 at once.”—P. B. SMITH. “I like it as well as ever. I think a photographer without it would be in a perpetual state of ignorance concerning his own business, and be sure to be humbugged twenty times the cost of it.”—W. G. C. KIMBALL.

PICTURES RECEIVED.—From Mr. M. L. DAGGETT, with REED & BARTON, Taunton, Mass., three exquisite panel photographs of a silver and glass vase. As the work of the silversmith it is a very fine production; as a photograph it is a gem of artistic production. Mr. E. E. HENRY, Leavenworth, Kansas, sends us something novel, striking, and handsome in the way of large panel photographs. The figures are bust and three-quarters, printed and mounted on panels $4\frac{1}{2} \times 10\frac{1}{2}$ inches, with bevelled edges. These again are mounted on chocolate boards $7\frac{1}{2} \times 13\frac{1}{2}$. The effect is very pretty, and the pictures are all ready for framing without further matting. The style is fresh and original, and finds ready sale. Mr. HENRY writes us. Several large cabinet heads of the same subject, from Mr. CRISPELL, Battle Creek, Mich. The lighting and chemical effects are fine, and the prints all that the most fastidious taste could demand. From Mr. JOHN A. MATHER, Titusville, Pa., samples of cabinet and panel pictures. Clean, sharp work with good detail throughout. Mr. MATHER constantly progresses. Messrs. RIEMAN & TUTTLE, San Francisco, Cal., send us quite a collection of specimens of their cabinet pictures. The subjects are nearly all in fancy dress, and some of them in very difficult poses. This firm started but a few months ago, but they are already doing work that promises to rival the long-established galleries of their city. They are "very busy." Several cabinet photographs of ladies and children, from Mr. Wm. McComb, Muskegan, Mich., which show care, thought, and feeling. Mr. H. B. HILLYER, Austin, Texas, sends two cards of three-quarter figures of ladies. From R. H. LEWIS, Hudson, Mass., a couple of carte-de-visites. From NORTH & OSWALD, Toledo, Ohio, a cabinet portrait of Mr. A. C. NORTH in uniform. From Mr. F. M. LACEY, Indianapolis, Ind., several fine specimens of card and cabinet pictures. Lighting and chemical effect are excellent, and the work such as no one need be ashamed of. Samples of dry-plate work from Mr. T. H. BLAIR, Franklin, Mass. One of them, a landscape view, is very good. The others, portraits of a child, one made in twelve, the other in fifteen seconds, are remarkable for portrait emulsion. Mr. NEWTON's plates were used. Mr. T. S. JOHNSON, Homewood, Ill., sends card and cabinet specimens, including a real gem of a landscape, which he calls "The Winding of the River," and horses, poultry, and people. From Mr. GEO. N. COBB, Binghamton, N. Y., several fine specimens of his most excellent work, both portrait and stereoscopic. We are happy to announce to our readers that our next number will be embellished

by a plain portrait of Mr. COBB's production. It will also be accompanied by a letter from Mr. COBB, giving his formula and method of manipulation.

Our readers will be glad to hear that their old favorite, the VOIGTLANDER lens, has lately been improved upon. Messrs. BENJAMIN FRENCH & Co. announce that they have lately received some of the new portrait lenses, 4×4 and extra 4×4 sizes, and on trial find them to be much quicker working than the old style. Various outside parties have tried them, and are warm in their expressions of satisfaction. Messrs. BENJAMIN FRENCH & Co. will soon have in a full line of these improved lenses, when we shall speak more fully of them.

In a previous number of this magazine we called attention to the interesting scheme of Mr. C. D. MOSHER, Chicago, Ill., for handing down to the second centennial celebration the portraits, autographs, and short biographical sketches of prominent persons of the present day. These memorials are to be carefully packed in a fire-proof safe, and decreed to the city of Chicago, "to be opened in 1976." The collection, now a valuable one, will become doubly so after the lapse of another century. The enterprise is a laudable one, and we heartily wish success to its founder.

THE *Dry Goods Bulletin*, New York, gives a very interesting sketch of the Scovill Manufacturing Co.'s Brass Works at Waterbury, Conn. Here this well-known firm have been established for over half a century, making every style of small brass goods, besides sheet metal and fancy dress buttons for the billions. Their manufacture of the last-named article has grown with the increased demand of the fashion of the day, and their annual production would decorate half the world with one of these very necessary ornaments of ladies' dresses. The *Scientific American* also recently described the Waterbury branch of the Scovill Manufacturing Co.'s works, with a full-page illustration and views of the same.

FROM Mr. W. H. REID, Nos. 352 and 354 Euclid Avenue, Cleveland, Ohio, we have his full catalogues of photographic stock for the winter trade, including every variety of card-mounts, mats, velvet frames, easels, fancy moulding and gilt frames, photograph paper, chemicals, lenses, and apparatus of every description. In fact, everything necessary to the complete furnishing

of the photographer's laboratory and skylight. Mr. REID also deals in artists' materials of every sort. A list of these goods is embodied in an attractive little pamphlet separate from his photographic stock catalogue. He also publishes a "bargain-list" of second-hand apparatus. Photographers, give him a trial. Send for his price-list.

MESSRS. CHARLES COOPER & Co. send us their December price-list of chemicals. These gentlemen are always prompt in filling their orders, and their chemicals and preparations are always of the best quality. We can warmly recommend stockdealers to give them a trial. See their advertisement.

MOsaICS, 1880.—Again our little annual visitor is before us, full of good things from willing hearts and ready pens. Our call for contributions to its pages, brought us more matter than we could possibly compress into its limited space. Our readers, however, shall not be deprived of these practical communications, for whatever was laid over will appear in due time in these pages. We would call special attention to the advertisement in full of the contents. Among the seventy-four articles here offered the reader must be hard indeed to please if he find *nothing* to interest, help, or instruct him. Nearly every subject connected with our art is treated upon in this little volume; and the great variety of style, of thought, and of expression, add zest to the pleasure of its perusal. Our space is limited, but we still crowd in one or two testimonials to the value of *Mosaics*. "It is a nut full of meat and well worth cracking."—M. L. DAGGETT. "Thanks for your most valuable book, *Mosaics*. I do not see how I could do without it. It was a very cold morning when it came, but it made one feel warm to see it. I tell you, reading it straight through would warm the blood of any silver-dauber."—J. H. REUVERS.

WE have received from the Industrial Publication Co., New York, the *Workshop Companion*, "a collection of useful and reliable recipes, rules, processes, methods, wrinkles, and practical hints for the household and the shop." Price, 35 cents.

SOLAR CAMERAS of the most compact and unique form and manufacture are supplied by the original patentee, Prof. D. A. WOODWARD, Baltimore, at very low prices. A change in his address will be seen by referring to his advertisement.

AROUND THE WORLD WITH GENERAL GRANT.—The most complete and elegantly illustrated book of travels ever produced. A narrative of the visit of General U. S. GRANT, ex-President of the United States, to various countries in Europe, Asia, and Africa, in 1877, 1878, and 1879, to which are added certain conversations with General GRANT on questions connected with American politics and history. By JOHN RUSSELL YOUNG. Published in twenty parts, at fifty cents each part; with 800 illustrations, by the best artists in America.

We have received a copy of this elegant work from the American News Company, New York, and will be glad to furnish it to our readers at the regular subscription price—50 cents each part, or \$10.00 for the complete work. We quote from Mr. YOUNG's letter in regard to the authenticity of the book: "The only narrative of General GRANT's tour of which I have any knowledge, or in which I take an interest, is that now in course of publication by the American News Company. Of this narrative I am the author. As I was the companion of General GRANT in his journeys, it naturally follows that I am the only one who could write of them from personal observation."

Mr. YOUNG's pleasing style and spirited descriptions are well known to all readers of the New York *Herald*. His latest work, comprised in this book, forms one of the most attractive productions in the literature of the day. The illustrations are by the most celebrated American artists, several of them from photographs taken on the spot. The frontispiece, a portrait of General GRANT, is from a photograph taken in Paris. The steel engraving was done by W. E. MARSHALL, the best line engraver in America. GUSTAVE DORE says of him: "He is the veritable master of his art." The complete work is a most interesting book of travels, and it seems all the more valuable from the fact that the actors were all Americans of world-wide fame.

We have had numerous inquiries from exhibitors for lantern slides to illustrate this notable tour. We are prepared to furnish these, and will send list of slides on application, with reference to descriptions of each in our *Journey books*.

ARTOTYPE—Correction.—Our correspondent who gave us the artotype formula published in our November issue, says our types made a blunder. Instead of 40 grains of chrome-alum it should read 140 grains. He assures us that his instructions came direct from a licensee copied by the artotype process upon artotype paper, in a reduced size; and with this correction they are genuine.

DOUGLASS, THOMPSON & Co.—This is the firm title of the successorship to the "Great Central" Stock Depot of Chicago, so long and well known while headed by the name of CHAS. W. STEVENS. Mr. STEVENS retires from the field, and Messrs. G. A. DOUGLASS and HENRY G. THOMPSON—men who have been identified with the "Great Central" for nearly ten years—take his place as proprietors and managers. This is a strong combination, and we wish it much success.

No man in the West has done so much good and unselfish work for the photographic fraternity at large as Mr. DOUGLASS. His labors have been indefatigable. He has been identified with photography for nearly twenty-five years, and being a progressive, wide-awake, growing man, has therefore had a mind expansive enough to allow him to look out for others besides himself. Any candid observer must see how he has *made alive* the meetings of the Society in Chicago, and how interesting and valuable his energy has caused them to be. This same energy and generosity are practiced in his business; and now, at the head of the new firm, he must make many staunch friends, and hold them to him.

Mr. THOMPSON, though less prominent than his partner, is very popular with the trade, among whom he is very well known. No doubt all the friends of these gentlemen will flock about them, and give the *new* "Great Central" firm a first-class opening for the New Year. The "Great Central" is still located at 229 and 231 State St., Chicago. Our best wishes go out towards it.

BROMO-GELATIN EMULSION WORK.—Mr. J. H. SCOTFORD, Lansing, Mich., has favored us with a batch of prints from negatives made on his bromo-gelatin emulsion plates, which are surprisingly excellent. They include portraits of old people and young, and of tiny infants fully exposed in one to three seconds. If such plates can be made uniformly and at all seasons, there is a bright future ahead for them, and we congratulate Mr. SCOTFORD upon his success. He has sent us some plates which we shall report upon shortly. He supplies his formula to all buyers of his plates. See prices in his advertisement.

CORRECTION.—In the toning bath given by Mr. C. F. RICHARDSON, on page 36 of *Mosaics*, the bath was by mistake made too strong. The proportions should be one ounce of the stock solution to fifty to sixty ounces of water.

"PHOTOGRAPHIC NOTES."—We have received a copy of the second edition of this excellent manual from the author, Dr. PAUL E. LIESEGANG, Dusseldorf, Germany, but this time re-

vised and enlarged, and in the French language, forming one of the series of works published by Mons. GAUTHIER VILLARS, Paris. It is embellished by a sweet little phototype print of a tiny miss reflected in a mirror. A number of American skylights are described in the work.

THE Council of the Bristol and West of England Amateur Photographic Association International Exhibition beg to announce that they intend to hold an exhibition of photographs, photographic apparatus, and appliances, in the galleries of the Academy of Arts, Queen's Road, Clifton, Bristol, to be opened on Friday, 17th December, 1880; continuing open till Friday, 15th January, 1881.

Apart from photographs for competition, the Council will esteem it a favor if those who have any interesting examples of the history and progress of photography, will kindly lend them for exhibition.

The following is a list of the medals which will be awarded for the best and second best pictures in the various classes, and to be decided on the opinions of five gentlemen, being two eminent artists and three well-known photographers, three of the judges being outside the Association: 1. A gold medal for the picture or series of pictures which, in the opinion of the judges, possesses the highest degree of merit, irrespective of size or subject; 2. One silver and one bronze medal for the best and second best landscape or series of landscapes of $8\frac{1}{2}$ by $6\frac{1}{4}$, or under; 3. One silver and one bronze medal for the best and second best landscape or series of landscapes above $8\frac{1}{2}$ by $6\frac{1}{2}$; 4. One silver and one bronze medal for the best and second best portrait or series of portraits of $8\frac{1}{2}$ by $6\frac{1}{2}$, or under; 5. One silver and one bronze medal for the best and second best portrait or series of portraits above $8\frac{1}{2}$ by $6\frac{1}{2}$; 6. One silver and one bronze medal for the best and second best genre picture; 7. One silver medal for the best enlargement of any subject, and by any process, provided it be the work of the exhibitor; 8. One bronze medal for the best transparency or series of transparencies; 9. Four bronze medals, to be awarded according to the discretion of the judges, for improved apparatus, materials, processes, or other meritorious productions.

All communications must be addressed to the Honorary Secretary, H. A. H. DANIEL, Avonmead, Leigh Road, Clifton, Bristol, England. Copies of conditions and application forms for intending exhibitors may be obtained of the Honorary Secretary.

Our American men of enterprise should compete in this matter.



GEO. N. COBB,

Boston Public Library.

BINGHAMTON,

T H E

Philadelphia Photographer.

Vol. XVII.

FEBRUARY, 1880.

No. 194.

Entered according to Act of Congress, in the year 1880,

By EDWARD L. WILSON,

In the office of the Librarian of Congress, at Washington, D. C.

HOW BUSINESS IS, AND WHAT OF IT.

RESPONSES TO OUR CIRCULAR LETTER.

(Continued from page 8.)

THE answers to our circular letter of thirteen queries, continue to come into us from all quarters of our country. It will be some months before we can publish them all. Meanwhile we ask patience from those who were so generously ready to tell us what fine prospects are ahead. *Any one* who has the ability to put this and that together must gather from these letters that *good times* are now on hand, and we must all go cheerfully forward and take advantage of them. We now hear

FROM H. B. HILLYER, TEXAS.

Your journal and queries to hand. I gladly respond, for I am ever willing to contribute my mite to the general good.

1. During the past two years business in Texas has gradually improved, but the unprecedented drought of the past summer has cut off the crops fully one-half, and in many parts of the State three-fourths, and hence we are now in the midst of the most stringent times known for years, with a certainty of its growing worse, until relieved in part by the next year's crop. During thirty-three years' residence in this State, I have seen no failure in crops equal to the present one.

3. I do not show proofs unless requested to. I never exact pay in advance; doing business in a small place, with people mostly known to me, I cannot well do it, but think the rule a good one, and would be glad to adopt it could I do so without injury to me. I guarantee satisfaction. I consult with and find the wishes of my patrons, their likes and dislikes, and the cause of failure or success in former picture; do my best to please; show them the negative; resit them, making any changes we jointly agree upon, and when a good negative is made I print up the lot wanted, and rarely fail to give satisfaction. In two years' business I have made over, free of charge, six pictures, and have lost by parties failing to call for the finished work, only five dollars, and twenty-five dollars will cover loss on bad debts.

5 and 6. I find that our art, being yet in its infancy, is making rapid advances, and it requires great diligence, perseverance, and study to keep apace with it. The man who does not take the journals, and who is fully satisfied with his work, and stands still, will soon find himself left behind; his business will "log" and grow dull, times become hard, and his traps offered for rent or sale. Our country is full of ex- "artists," whose history is written in this paragraph. The taste of our people is becoming rapidly educated, and poor work can no longer be palmed off upon even the most ignorant;

good work is appreciated and paid for liberally, and our patrons are more easily satisfied with our prices than the work.

7. The prices in this State have gradually lowered, from two reasons: First. New comers from the old States, and returned visitors therefrom, have brought the prices there, and this has produced a general feeling among our patrons that our prices were high, and we have lowered them in response to this feeling, as a matter of duty. Second. In some places, sharpers from abroad have opened galleries, and made a run on low prices, which have compelled their competitors to do likewise, and hence it has been a real disadvantage to the profession, and lowered the standard of work. A regular gallery, doing good work, need have no fear of low-priced competition. I have known in our State several instances of putting down prices as a remedy for hard times. In every case it has proved a snare and delusion.

10. The larger part of our work is card photographs, some cabinets, and 8 x 10, and I am of late doing a great deal of larger work, up to even life size.

11. Fancy backgrounds and accessories are in demand, but mostly for cabinet and 8 x 10 pictures. Yet fully half of my work is bust pictures.

12. While every year brings forth its quota of new things, many of which are worthless and short-lived, yet our art is improving. Retouching is a power in the hands of an artist not to be ignored, so is inprinting and judicious burnishing. We are also making better negatives and better prints, and as the chemistry of our art has become better understood, our results are more certain, and resulting prints more durable. Years ago I made an occasional good picture, now bad ones are of accidental and rare occurrence. I pride myself upon the durability of my work. I have in my collection many pictures made six to eight and ten years, that show little or no signs of fading; these pictures have been hanging in my studio, or lying loosely in drawers, with little or no care to preserve them.

13. I have made a reduction in card photographs, fifty cents on the dozen price, getting the same price per half dozen; prices of cabinets reduced one dollar on the dozen,

fifty cents on the half dozen. I have done so because the leading artists of the State have set the example. My prices are below one of my competitors, and above the others.

Finally, in the conduct of my business I have ever held to the doctrine that a man with money and brains enough to start business for himself, has the *right* to lay down the terms upon which he is willing to meet the public; they should be based upon principles of equity, justice, and honor, regarding that great moral law "do unto others as you would have others do unto you," and if he is worthy the public will soon find it out, and he is sure to meet with the measure of success that his character and ability deserve. The public may for awhile be deceived by display and advertisements, but in time will judge rightly, and render honor to whom honor is due.

I close with best wishes.

FROM GEORGE S. COOK, SOUTH CAROLINA.

I hurriedly answer some of the questions you sent me, and am only sorry I cannot give them more attention, as your object is to instruct the fraternity.

1. How is business?

It has been very dull for the last few months, and less than any year since the war. Just now it shows a little improvement.

2. What are the prospects for the coming season?

Not favorable; for the South generally will not improve so rapidly as the North.

3. Do you show proofs?

In about ten minutes, before varnishing.

Generally give three sittings, posing different, and expect each one to be good. Slightly run over the proof with lead-pencil, if too harsh. Do not expect to sit over, as I do my best in the three trials. If the sitter does not say they are the best they ever had, consider it a failure, and try again. I do not have to sit over more than *one* in *fifty*, and never force a picture, if I had to try fifty sittings. If they were all finished, and they did not like them, I would not let them go.

4. Do you *secure* pay in advance?

I never take pay in advance, and trust every one who comes in the gallery, strangers

and all. When the pictures are done, they pay for them, and, I may add, none are left on my hands; and all pay me; not ten dollars lost during the year. I did the same when in New York, and lost but a trifle, and made hundreds by it. There is only one thing to be done to meet with success. You must get a *better picture* than anybody else can get. It is hard work sometimes; but there is *beauty in every face* (my motto), and you must find it.

5. Are you encouraged to make continued effort to improve the quality of your pictures?

No good artist can ever be satisfied with his work, and customers are demanding constant changes and novelty. My customers care more for the *pose* than accessories.

7. Has low-priced competition increased, and does it do real damage?

Low prices have increased, and done some damage, but are not generally lasting. Good pictures will come to the front again. Those who have put down prices generally acknowledge it as an error.

8. Do you usually make more than one sitting, and allow a choice?

Make three, or more, if needed, and finish negatives according to number of pictures needed. No. 9 answered in No. 5.

11. What sizes and styles are the most popular?

Cabinets and panels; large ones are more for specimens than for sale. If times improve, the large ones will no doubt sell.

Fancy backgrounds and accessories are liked by some, but when put side by side with a good, plain, dark ground, the latter is generally preferred; and yet the fancy backgrounds, for specimens, are more admired.

12. Retouching, burnishing, and printing have proved great additions to the general run of pictures. No one can deny it. The retouching must be done very judiciously, or it will be wooden; and, unfortunately, too many know how to touch, but do not know how *not* to touch.

13. I have reduced prices within two years. Cabinets, from \$12 to \$10; cards, from \$6 to \$5. The reason: the people were too poor to pay more.

FROM R. W. DAWSON, ARKANSAS.

You will find my order for journal inclosed with this. I received the *Mosaics* all right; it is good. I have been thinking that I would answer your Circular Letter to Photographers for the past month, but I have had so much work to do that I could not get time, and now have to do it on Christmas day. A Merry Christmas to you, by the way; also a Happy New Year.

Now as to how is business?

It is splendid. The prospects for the coming year are good.

3. Do I show proofs?

No; I show the negative, by making it look like a positive with a little mercury.

4. Pay in advance most always; if not, I tell them it is the rule, and that I require *all* to do the same; and I have no trouble.

5. Yes; always trying to improve, and have never been satisfied, but want to do better, although I have been in the business for twenty-two years.

6. Efforts to please, I think, are appreciated, as my business is on the increase.

7. No; low prices are going out of fashion.

8. No; sometimes they want to try a second time, but mostly always take the first.

9. Yes; I think it has. They can all tell when they see a good picture.

10. Cards and cabinets; cabinets the most.

11. Yes; most all want them with fancy backgrounds; in fact, they want them just as nice as you can make them. And I find that when I get out something good, it always brings me another order.

12. Yes; I think retouching and burnishing have been an improvement, from the fact that whenever I make a good job, if retouching and burnishing, they are always well pleased; therefore, it is an improvement. Proof: it fills my pocketbook often.

13. No; I have raised the price of cards to \$4; cabinet, \$6; 4-4, \$3 for first; \$1.50 for all extra copies.

I shall try and go to the convention this next summer, if there is one, as I have never been to any of them.

FROM R. GOEBEL, MISSOURI.

In answer to your questions:

1. Business is improving slowly.

2. The prospects for the coming season are

a little better than they have been for the last three years.

3. I very seldom make proofs; it is very seldom desired here.

4. Since three-quarters of my work is sent by mail, it is all cash. Persons whom I do not know have to pay in advance.

5. I generally give two sittings, more to satisfy myself that I have the best side of the patron's face.

6. I always try to improve my work, which is appreciated by my customers. Most all think that I am the best photographer in the United States. I do not.

7. Low-priced competition hurts always in small communities, more or less. When people have spent their money for poor pictures most of them do not know it, and have not the money to get better work made. (I had competition for two years, but he gave out last spring, and left.)

12. I think the retouching of negatives is one of the greatest improvements, since we can make more brilliant and bold prints than formerly. I find deep-printed photographs, toned to nearly black, will fade so little in twenty years that very few will find a change. All vignette and delicate prints are pleasing for the eyes, but not lasting. Burnishing I find no improvement of good taste; but since there is a demand for the gloss, we all do it.

13. I have not reduced prices since the last two years. Cartes, \$1.75 per half dozen; \$2.50 per dozen.

FROM MISS H. H. FLANAGIN, NEW JERSEY.

I have been trying for a month to get time to respond to your letter of inquiries, not so much because to answer them only would take time, but there is so much that for some reason others do not say, that it seems dangerous for talkative people to be exposed to such a temptation.

1 and 2. Business is moderate. I cannot say it has improved within two or three years past in amount of receipts. This could hardly be expected when financial embarrassments are the rule rather than exception; but the *class* of customers has greatly improved. Of future prospects, time will tell.

3. I show proofs when required, always,

if I have any doubts as to their being acceptable. I think all successful photographers do that virtually. Who is there among us who does not have to do work over, if the first effort has not given satisfaction? To avoid this, I try not to let a customer leave the chair until the negative is the best I think I can make at the time.

4. Almost always; an occasional exception, principally of old customers.

5. Immensely so, by an approving conscience, backed up by

6. And my efforts are well appreciated.

7. No; the most harm it has done is to furnish me miserable pictures to copy; for some of their customers are sure to die, and then the friends will have good pictures. Then, too, the competitor fares bad. The last one went away, and committed suicide.

8. Very seldom.

9. Improved and an exacting public taste.

10. Cards, in vignette and medallion, 4-4's, and an occasional extra 4-4 have been the most demanded. Recently, small cabinets, especially for children. Cards, per dozen, \$3; 4-4, \$1.50; duplicates, \$1; cabinets, \$6 per dozen.

11. Not in excess of what I have in hand.

12. Doubtless retouching is a genuine improvement. Burnishing has hardly been practiced long enough to decide its merits.

13. No change in prices, except cabinets, for several years. I reduced cabinets \$2, and advanced 4-4's some five years since.

Summary.

It seems to me that fancy backgrounds are being used to excess, and serve better to hide dirty plates than a display of ability to make good work. As I understand the principal object of our art, it is to secure correct pictures of people (friends or otherwise), by which we carry in our minds a "shadowy" presence when they are absent from us.

The face is the part of the picture that we care for; and I fail to see how fancy backgrounds, or cramped or distorted forms, with the eyes in a position indicating a search for the lost arts among stars long since extinct, can contribute to perfecting and advancing our skill in producing permanent and life-like pictures of the human family.

If criticism is allowable, I would like to say that of all the promenade, panel, and what-not styles presented through the *Philadelphia Photographer*, there has none of them so pleased my eye as the picture in July of 1878, by Todd, of Sacramento. If a more happy disposal of the lady's left hand had been made, the whole would have been complete; and yet, even the artist (if I remember correctly) apologized for his picture.

I have not forgotten that "styles" are the thing to draw custom, and for that they are well enough; but we seem to be drifting away from the prime object of our work.

One other thing. Why do not those who furnish pictures for the magazines now and then use a gentleman for a subject, and not, as is so generally the case, a lady? I am sure I experience often a good deal of difficulty in posing gentlemen gracefully; and more frequent illustrations from them would be highly beneficial.

FROM JOHN A. MATHER, PENNA.

In answer to your questions, I will do the best I can in giving you my answers and opinions, as follows:

1. How is business; does it improve? *No.*
2. What is the prospects for the coming season? I see no prospect for improvement in this particular locality (oil regions). The long depression in the product of our section (oil) has reduced every article of luxury down to zero, and only articles of necessity are in demand.
3. Do you show proofs, and what is your system? Yes, I show proofs, and demand part payment when proofs are satisfactory and correct.
4. Do you demand payment in advance? I do, invariably, and since January last have been very successful in getting payment in advance, although it is very difficult in so small a town to make the public understand why they should pay before getting their pictures. I always take pay in advance for duplicates, and have lost several orders for duplicate pictures because I would not print them until paid for; my *rule* being absolute in the matter.

5 and 6. Are you encouraged to make continual effort to improve your work? Em-

phatically no. My experience is that not one-half of the public understand, or care to understand, the *finesse* effects of good lighting, posing, etc., nor do they appreciate the study and pains I take to get first-class work; at least only a few do.

7. Has low-priced competition increased, and does it do real damage? My answer is as follows: *Yes*; as I am the daddy almost of all photographers within a radius of twenty-five miles of Titusville, or what was known previous to McKean County as Bradford (the oil region of Pennsylvania), all of them work for less prices than I do, and there is not a day but some one comes into my rooms and says, in answer to my prices, which are as follows: for cabinets, large heads, \$8 for 12, \$5 for 6; small heads, \$7 for 12, \$4 for 6; cards, \$3 for 12, \$2 for 6; they say, "Why, I can get them at Oil City, Jamestown, Corry, Warren, or Meadville for very much less," and price being their object more than quality of work, they depart for other places, and I, in my stubbornness and pride for my reputation and honor of my calling, will suffer rather than prostrate the business by ruining prices. Copying agents who know nothing of the business, infest this section by hundreds; result, they tell a customer that all they want is a tintype, and they will make a fine photo-chromo, frame and all, for \$3; I get for taking it fifty cents, all other places around here two for fifty cents, and very often four for fifty cents; consequently I lose the job of making a picture that would pay me by *such tramps*.

8. Do you usually make more than one sitting? Yes; about on an average two sittings in cabinets, not for cards.

9. Has the public taste improved, and is it more exacting? My answer is, with the majority of the public it has not; with some I find they are more exacting, and very unreasonable.

10. What sizes and styles are the most popular? With me, cabinet, promenade, and boudoir; very few cards required.

11. Are pictures with fancy backgrounds demanded? With me they are not; and if I had not laid out a large amount of money in cabinet and fancy backgrounds, I would not, for big cabinets is my general run;

very large heads being rather troublesome to some artists.

12. Have the so-called improvements, such as retouching and burnishing, been real improvements? Yes, when properly done, and not spoiled, as about one-half of the photographs are to-day.

13. Have you reduced prices within two years; and if so, why? Very reluctantly I have. I had to, or go to bottoming chairs for a living. From every point I was surrounded by lower prices than I was making pictures for, and my customers would go fifty miles, to Jamestown, N. Y., to get cabinets for \$4 for 12; my prices being \$8 for cabinets of all kinds and sizes, and my cards \$4 for 12, \$2.50 for 6.

FROM MRS. E. N. LOCKWOOD, WIS.

1. This beautiful autumn finds us full of business; not all photographically, but getting ready for the winter and holiday trade. We like to make our place beautiful and attractive. An art studio should be arranged in such a manner as to make people feel good and happy, restful and quiet, as soon as they come within its walls. The dull days are just the ones to use for cleaning out the summer dust and cobwebs, and getting nicely settled for business.

2. We think there is a good prospect for better business than we have had during the last two years, and people seem to have better supplied pocketbooks; therefore, we have done all we could to make our gallery beautiful, cosy, homelike, and supplied with everything to give our customers any style of picture desired, and during the operation, have them surrounded only by that which will give them a pleasant countenance, if they are in any condition to reflect objects.

We believe there are very few people who are not sensitive enough to feel any different when entering a room where all is confusion, dirt, and disorder, or where everything is clean, neat, and tastefully arranged to delight the eye; and I think it is the duty of every photographer to be very particular in this respect, as it will have more to do with the expression they obtain in the camera than anything else, unless it be the disposition of the operator; but we *know he will*

be better natured in a clean and orderly room than in dirt and confusion.

3. We make but few proofs. Most of our customers are satisfied by looking at the negative, to judge of size and position, and trusting to our word whether the photograph and expression are all right or not.

4. We find it is quite difficult to make all pay in advance, or when the order is given, although we endeavor to have them.

6. When we have customers bring in some pictures they have had sent them, and "want one just like it," or dictate us as to a side or front view, and how they must sit, we very good naturedly follow their directions, then remark, "Now I wish to make one to suit myself," and accordingly profit by the previous trial; and are sure to obtain the most satisfactory result, not only in pose but in expression; for we have first listened to them, and won their respect by not opposing them; and by comparing the two sittings, you prove your own ideas and knowledge were best, and thereafter you will have their confidence.

7. We never pay any attention to cheap competitors. We place our prices just where we think we can live at it, do justice to our work and customers, and attend to our business the best we know how; and we have always had enough to do, and for the best class of people, far and near. Low-priced galleries are on the decrease in this part of the world. Poor work does not seem to satisfy enough people to let "one-horse galleries" live but a very short time. Whatever we attempt to do, it pays to do to the very best of our ability, and always wins friends and patrons.

8. We usually make two sittings, giving them the choice, or they tell us to finish the one we think the best.

9. We find the public taste has much improved, and they are more observing of little things which go far towards making a picture good or bad.

10. We make a great many cabinet negatives, showing about half length, from which we make both cards and cabinets, charging \$5 for six cabinets and six cards from one negative.

11. Our experience has proved that it pays to keep up with the times, and make a

variety of pictures for the case, having different accessories and backgrounds; and yet the majority of our customers prefer vignette or bust portraits, except for children. Fancy backgrounds and printing are good to make up a variety, and to use for a *picture*, but for a *likeness* of a person, which they wish to keep as such, it will be appreciated better in five years, if the fancy work and ornamental part is mostly left out; for too much gets to be tiresome and stale. It detracts from the face, which is to be the one object sought for.

12. I think the greatest improvement we have had in photography has been *judicious retouching* of negatives; but it can be, and is, often abused, by those who have not the faintest conception of what is required on a negative to better it—what to leave, and what to obliterate. The modelling of the face needs to be studied as much as if a portrait was to be painted; yet few retouchers give a thought to this point.

13. We reduced the price some on our cards about one year ago, and make them for \$3 per dozen, or \$2 per half dozen, instead of \$2.50 and \$4. We thought we would do enough more to make it pay, and I think it has been so.

FROM SAMUEL ARMSTRONG, IOWA.

On account of sickness Mr. Kracaw was compelled to sell out and go to the mountains. Will answer your questions to the best of my ability, and if the same are acceptable you are a thousandfold welcome, for my heart, soul, and body are subjects of our beautiful art; therefore, am willing to do all that lies in my power for the same.

Business is slowly and steadily on the improve, and the prospects for the coming season are very favorable indeed.

We always show proofs, and make it a point to please regardless of cost, and find in the end it is to our advantage to do so.

We secure pay in advance when it is *possible*, and in almost every case it gives better satisfaction than the old system, not only to our patrons, but encourages the photographer to do his part; and again, when I make a promise to my patrons, I try to be very prompt in fulfilling the same.

The demand for first-class work is con-

stantly increasing, and by the same we are encouraged to make continuous efforts to improve the quality and style of our productions.

In a great measure our efforts to please our patrons are highly appreciated.

The public taste has largely improved in this particular, that they largely depend on the judgment of the artist in position and style.

I make negatives until I am satisfied it is the best I can do, then show proofs of those I consider the best; generally find what pleases me gives the best satisfaction to my patrons.

Cartes-de-visite and cabinets are the most popular sizes. Bust for cards, and half form and full length for *cabinets*.

Low-priced competition has increased, but it is generally inferior work, and as far as my observation goes, it does not affect those who are on the higher rounds of the ladder.

Fancy backgrounds and accessories are greatly demanded, as they relieve the stiffness of the picture, and make it look more homelike; in this respect the public taste has improved very much. Therefore, it strikes me very forcibly, that we should always be on the lookout in studying positions and effects from life, for that is what we wish to imitate.

My views of retouching, if not overdone, is that it is a vast improvement, and the same may be said of burnishing.

The prices of pictures have been reduced, and the cause of same was, as with everything else, scarcity of money, and as everything is on the rise, am in hopes that pictures will hold their own.

I noticed in the last few numbers of the *Philadelphia Photographer* a convention is agitated. For my part I am willing to do my share; would prefer Columbus, Ohio; I think it would be more of a *centre*.

BRIGHTER SKIES.

BY W. T. BROOKS.

FELLOW laborers in our art, cheer up! In union there is strength; let us stand together as a fraternity, and try to aid and assist each other as well as we know how, through the aid of our valued journals.

Many of you remember the appeal I made to you for help during the epidemic. Well, I wish to say publicly to you all, that I only received, all told, six dollars; yes, the pitiful sum of six dollars, and one-third of that came from that noble, whole-souled prince, Well G. Singhi, of Binghamton, N. Y. I would not take a handsome present for his letter.

Brethren, it was a dark cloud that hung over me then, but thanks, there is now a silver lining; then all was dark and drear; no home, no gallery, no money, no instruments, no chemicals. Was it not enough to make the stoutest heart quail? I wish here to return thanks to Gatchel & Hyatt's Louisville house for remitting my account of seven dollars for a box of glass, and to Edward L. Wilson for four dollars, and to J. H. Fitzgibbon for courtesies and kind words.

During the epidemic our craft lost, at Holly Springs, Mr. and Mrs. M. L. Leake; they left a little bright four-year old boy in the hands of the kind Howard doctors. Brother Leake was a most excellent gentleman, a jeweler, and photographer, and his wife a most amiable little lady. At Grenada we lost Dr. Milton, who was a dentist and photographer; he was at one time a member of our State Legislature, and at the time of his death mayor of the city, and died in the harness nobly at his post, as one of the Howards; like many noble men in our ranks, he was the peer of any in their professions. Milton is a name long to be remembered in Grenada; he could command a regiment or a brigade. His business there now is being resumed by Mr. James H. Peirce, of Peirce Brothers, who bought out the gallery recently. At the same time I had the good fortune to be the successor of Peirce Brothers and J. W. Whitney, at this point, and our business is on the increase. Cards, three dollars per dozen; cabinets, six dollars; gems, fifty cents *each*, and no mistake.

Our work is not as good as I desire it, and I beg of the fraternity to mail me some of their work *unmounted*, so I may see where to improve. I know of lots of them who I *believe* are doing noble work, and I want to imitate you in it.

WATER VALLEY, MISS.

RAMBLING.*

BY IRVING SAUNDERS.

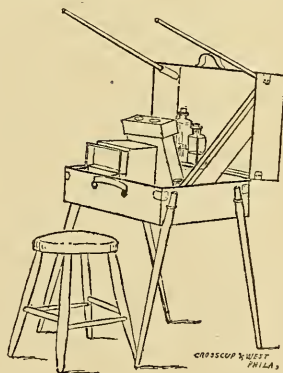
BEING one of those unfortunates who never find time for anything else than hard work, or rather incessant work, in the gallery, I determined this summer to break away; so advertised my rooms closed for the month of August, giving my printer and retoucher rest also. I found ample to occupy my time in making improvements in gallery, and trips out viewing, which last gave me great pleasure, for I came home with many fine negatives.

Associating with me a brother photographer, we used one outfit between us, thereby making the burden much lighter. We used the wet process; one working in the tent, and the other making the exposures.

I find great satisfaction in a negative full of delicate modelling, taken when nature is in her most favorable condition. One who is always shut up indoors needs just the exercise and benefit resulting therefrom to keep his health. I mean to give myself the same opportunity every summer.

I will give a short description, for the benefit of any who may wish the best arrangement for wet plates, though by another year the dry plate may supersede the wet with many. In my experience the wet has given much the best results.

The accompanying cut will explain itself. The valise is made of $\frac{5}{16}$ inch bass wood or



p ne, and measures 25 inches long, 15 inches high, and 10 inches broad on the inside when

* Written for Mosaics, but received too late.

closed. It contains everything but the tripod for making twenty-four negatives. I use no water for washing, but flow the plate after developing with

Glycerin,	2 ounces.
Acetic Acid,	4 "
Water,	6 "

and put the plate into a plate-box to be intensified and fixed after returning home. The cover is made of water-proof (ladies' cloaking) lined with yellow calico, with two thicknesses of the calico at the right hand, and when I receive the light for developing, the amount of light is regulated by raising the water-proof up, and pinning the corner more or less as necessary. I use a 10x12 rubber pan to develop over, and carry my developer, saturated solution, and reduce as necessary. The valise opens in halves, so that the part raised up perpendicularly forms a shelf for the bottles, plate-holder, etc., at the bottom. I have had two other dark-tent arrangements, but prefer this very much, being light; it forms a receptacle for necessary things, and two sides of tent when set up.

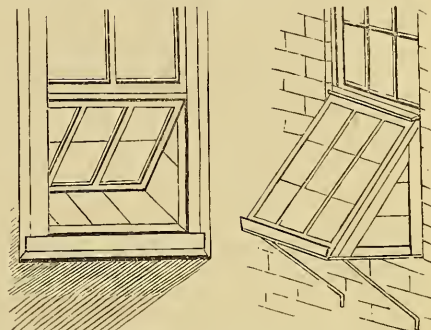
A WINTERTIME PRINTING-ROOM.

BY J. S. YOUNG.

HAVING been myself so often benefited by the numerous little dodges and improvements given by others in your pages, that I feel like contributing when I think I have something that may be of value to some one else.

For those who have regular fitted up printing-rooms this is not intended, but to those who are still printing by the "cold, open window," it will surely be a boon. Having a platform outside of my window, just as a good many others have, some three feet by four, I conceived the idea how easy it would be to get a sash made to fit. I got one that just reached from the outer edge of my platform to the lower edge of the upper sash of my window. I then had the ends inclosed, and the whole fitted up; putting in glass just as in my skylight. Any carpenter can easily construct the whole thing in one day. I made it tight and warm; my window will hold from fifteen to eighteen negatives, and

can print in all kinds of weather. Every artist knows that prints are very much improved by keeping them warm; then it is



so comfortable, and removes much of the unpleasantness of the work.

The above drawings represent my window, inside and out; but they are not needed, as any one can arrange their window similarly from these hasty suggestions.

PHOTOGRAPHING INTERIORS *

BY HOMO.

I HAVE no intention of publishing any process in this article. I wish to show in what way many photographs which have only a white *blotch* in place of a window, may be greatly improved. I have many negatives of interiors, showing not only the detail of the room, but through the window or windows the vista beyond. My method of obtaining this is very simple, but it can only be done in cases where sufficient light to get all the detail can be had from other windows. After focussing *carefully*, and this is a very important point, cover the windows on the inside with a dark cloth. After exposing for sufficient time for the interior, cover the lens, remove the cloth from the window, and stop down the lens; then give plenty of time for the landscape. To my mind, the landscape looks better in such connection if rather overtimed and flat. If done with good judgment, there is as much chance of a nice negative as if the photographer tried to have the window perfectly white. Did you ever try to see how

* Written for Mosaics, but received too late.

nice and soft a print you could get from a negative by masking parts, by double printing, and by tinting? This photography resembles law very greatly—it's *full of dodges*.

One word more, and that in regard to the spreading of light, which has troubled so many when photographing towards a window. Sometimes you have this trouble, and sometimes not. Did you reason this out? Let me state a fact, and you can draw your own conclusions. If beyond the window, in range of the lens, can be seen the sky, or any brilliantly illuminated object, you will always have this trouble in giving prolonged exposure. But if dense masses of green foliage, brick walls, or darkly-painted buildings come in the range, you will find no difficulty. The window will be white, with no spreading of the light.

APHORISMS, ANALOGIES, AND SIMILITUDES.

BY E. K. HOUGH.

PHOTOGRAPHY is like a fiddle, which any fool can play on, but which requires a master hand to show forth all its wonderful powers.

A photographer who is not an artist is like a priest who is not a Christian.

An artist who claims to be a photographer because he makes positions, yet knows nothing of the chemical manipulations, is like an officer of the army who is no soldier.

A photograph with good chemical effect, but a bad position, is like an awkward woman richly dressed.

A photograph with artistic position, but with bad lighting and chemical effect, is like a beautiful lady in ragged clothes.

The man who claims to be a photographer because he works certain photographic formulæ by rule, without understanding the principles upon which these formulæ are founded, is like the man who claimed to be a mathematician because he had committed the multiplication table to memory.

The photographer who claims to be an artist without having learned the principles of art, is like a man who would set up for an author or a poet without knowing the

first principles of language or grammatical construction.

A fine reception-room, with a poor sky-light, is like a costly scabbard to a wooden sword—good on parade, but poor in service.

A fine reception-room, but a slovenly dark-room, is like a rich dress covering a dirty petticoat, or a handsome parlor to a dirty kitchen.

Photographers who cannot work except by rule, and who are slaves to formulæ, are like blind men led by a string,—helpless when they lose it.

Pictures at the door not made in the gallery, are like false flags hung out by pirates to decoy unwary merchantmen.

AN ESSAY ON THE EDUCATION OF THE EYE

WITH REFERENCE TO PAINTING.

BY JOHN BURNET, F.R.S.

(Continued from page 28.)

CIRCLES.

If any one takes a drinking-glass or cup in his hand, with the mouth of it towards him, and gradually turn it from him, carefully watching it passing through all the elliptical forms, until the brim becomes a straight line in appearance, he will have a correct idea how it is that columns, or other circular objects, assume an oval shape at the top or bottom, according as they are below or above the eye. Or if he holds the cup with the side downwards, and turns the mouth gradually round towards him, he will perceive the cause why arches, or circular gateways, appear elliptical in a side view. It arises from parts of the circle being more foreshortened than other parts; that is to say, those parts which come more in the line of the visual rays. For example, let a circle be divided into equal parts, and suppose the eye of the spectator placed at A, those parts which lie in the direction of the rays of vision, B, occupy less space on the line, c, which cuts through them, and when drawn upon a flat surface would present an appearance like D, Fig. 16. Or imagine a line drawn through the centre, parallel with the

base line, and which accordingly retains its exact length, those portions of the circular

Fig. 15.

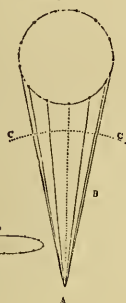


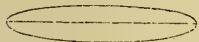
Fig. 16.



line which lie in the same direction are less diminished; while the other parts, lying in an opposite direction, naturally become subject to the greatest degree of foreshortening, as in Fig. 17.

Having now gone through the several forms of a triangle, square, and circle, I shall here recapitulate the influence of perspective upon their several lines. We have

Fig. 17.

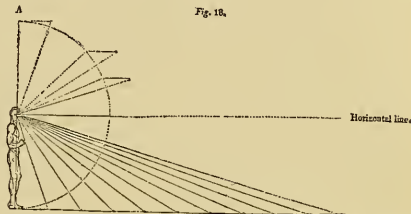


seen that lines are shortened according as they fall in the direction of the visual rays, and retain their original length only when they cut them at right angles; now this takes place wherever the objects are placed, whether near the foreground or in the distance; the eye of the spectator being a point from which imaginary lines radiate in any direction, and which are termed rays of vision, and along which imaginary lines all objects are received upon the retina; and though in painting we are obliged to delineate everything upon a flat surface, yet properly speaking, the line which cuts through these rays at equal distance from the eye is circular. We have seen also, that all objects diminish in size according to their distance from the spectator: and that this diminution is more or less sudden, according to the closeness of the spectator to the object; upon this matter the taste and judgment of the artist is shown, because though true according to nature, yet it may be represented with a very bad effect, and one figure of a group, or one column of a row, may be rendered preposterously large, so as to offend the eye, which, though at all times pleased with the truth, yet will be more delighted when that truth is rendered agreeable. When this distortion takes place in reality, we naturally change our position, until the eye is satisfied; but in painting, the whole

being a flat surface, we change our position in vain.

We have also seen that all horizontal surfaces of objects diminish in breadth as they approach the horizontal line, and regain their true width when they depart from it, either by being immediately above the eye, or directly under it, as may be perceived by the following diagram.

Fig. 18.

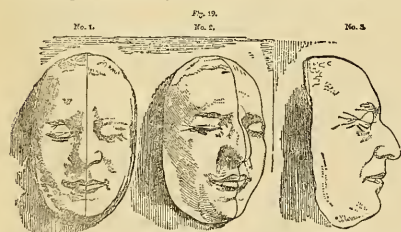


Now this rule applies to all flat surfaces, whether approaching the horizontal line, in consequence of their distance from the spectator, or from being placed at different degrees of height; for if they reach the eye in the direction of an angle of forty-five degrees, which is equidistant between a perpendicular and a horizontal line, they will be diminished in apparent width exactly one-half; if they are viewed at a greater or smaller angle, they will increase or diminish in the same degree. This is also the cause why surfaces of objects whose lines are at right angles with their base line, increase in length as they depart from the point of sight, either to the left hand or to the right, as may be seen by turning the diagram round, and making the line on which the eye of the spectator is placed a horizontal line in place of a perpendicular. This may appear too much a repetition of what has already been said respecting the cause of objects becoming foreshortened; but as it is the base on which all rules for true drawing are founded, it must be viewed in every position, that the student may thoroughly comprehend it.

When the mind of the student is informed of the various causes operating upon lines so as to change their appearance to the eye, let him look abroad upon natural objects, and contemplate the various changes produced in their forms by their situation, so that his eye may become familiar with those alterations in form, and his mind enriched

by a variety of examples ; thus making nature furnish him with a thousand diagrams, which he ought to draw and write down his remarks upon ; he will by this method not only educate his eye, but improve his mind at the same time: the study of drawing being intimately connected with observation and reflection.

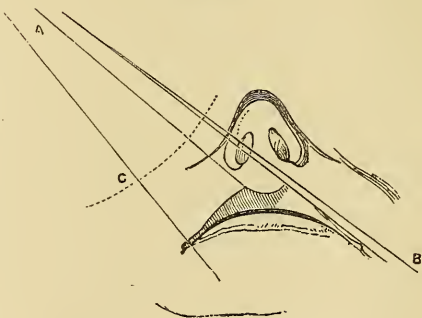
Having now endeavored to explain the leading principles of perspective, I shall proceed to put them into practical application ; but I must premise, that it is an essential requisite before proceeding to delineate any object, that we make ourselves thoroughly acquainted with its general character, otherwise the eye cannot convey to us its image distinctly ; neither can the hand render it with energy or precision. Let us take, for example, the human face, the component parts of which every one is acquainted with, yet the niceties of distinction in the several features few eyes can perceive, or render with perfect accuracy. This oftener arises from a want of due examination, so as to be able to guide the eye, than from any deficiency in the eye itself ; hence we perceive in the drawings of children and rude nations, a profile with the eye represented as if viewed in front, or a full view of the face with the nose as if seen in profile. To avoid such incongruities, therefore, the eye must be taught to see the changes which take place, and the mind be made acquainted with the causes of such change. In illustration of which, if we take a plaster cast, or mask of the face, such as is represented in Fig. 19, and draw a line down the centre, from the forehead to the chin, we perceive, when viewed directly in front, that it presents a straight perpendicular line, as in No. 1, though actually full of undulations from



passing over the entire profile, but as these projections and recedings of the line are immediately under each other, they reach the

eye in the same manner as if a string was held up before the mask in a perpendicular direction ; if, however, the mask is viewed when turned round half way between a profile and front face, as in No. 2, those parts of the line which recede or project will assume exactly one-half of their true character and projection ; while in the profile, No. 3, the line acquires its exact similitude, from its being undisturbed by those laws which regulate perspective. If we were to proceed to examine every feature in the same manner, we should find that the same laws lead us into a correct view of the alterations which take place upon every alteration in position. To explain this more clearly, if we take the mask and hold it with the chin towards us, so as to observe the curve on which the mouth is placed, as in Fig. 20, we can easily perceive that a person viewing it in the direction of the lines A B, which would give him a view of the

FIG. 20.



face between a front and a profile (or what is termed by artists a three-quarter), would see one side of the lip of its entire length, while the other side, lying in the direction of the visual rays, would be reduced to a very small space, as may be perceived by its breadth on the ideal line, c, which cuts such rays at right angles. Such, also, is the case with the nose, in the same view of the face ; one side remains undiminished, while the other side forms a mere outline, being seen entirely under the influence of perspective.

In finishing this part of the essay, I cannot conclude without reminding the pupil of the extreme importance of the very first preliminaries of the work, teaching the eye the power of measuring the distances be-

tween several points, as it is the basis of correct drawing. In drawing a head, if the points where the eyes, nose, and mouth ought to be placed can be correctly put down, one of the greatest difficulties will be conquered, and the detail of which each feature is composed rendered easy and effective, and the same remark applies to the power of combining the several parts of the largest assemblage of objects. The eye marks the distance of one or two leading points, which serve as a station to start from, and by a careful combination of exact dimensions moves over the whole space with a species of ideal trigonometry. Being also educated to observe the variations of the several lines according as they are more or less under the influence of perspective acting upon their form or size, a clear defined outline will be the result; not only unattainable by any other method, but even if attained, unaccompanied by the power of judging of its correctness.

The power of seeing objects correctly is gained by a careful examination of their general appearance, and of the component parts which produce such general appearance; it is necessary, therefore, before proceeding to delineate any object, to observe it attentively in the first instance, to examine it as a whole, so as to be convinced of its great leading features, the various shapes the principal lights take, also the forms of the darks, what occasions them, and why they are darker at one place than at another; the size and shape of the smaller component parts, where they are congregated most, and where the greatest vacuum is situated, where portions are seen entire, and where they are intercepted. Without the eye taking cog-



nizance of all these before proceeding, it will be impossible to give a just representation, either in the detail or in the general

effect; it will, moreover, have a prejudicial influence, inasmuch as it will lead to a style of drawing without feeling, character, or decision. One reason why the drawings of eminent artists are superior to all others is the great intelligence every line indicates, the smallest touch being expressive of the character; another advantage this previous contemplation of the subject has, is the storing of the mind with materials for future occasions, when it is necessary to have recourse to the memory. Knowledge in drawing, as well as in other sciences, is having ready a mass of materials, which we can apply to the subject in hand. Drawing much improves us as little as reading much, unless we contemplate and understand as we proceed: those who have acquired a readiness of hand without correctness and study, have but the shadow instead of the substance; and though to the unlearned their work have the appearance of excellence, yet to educated eyes they seem in the light of forgeries, or like the language of him who talks speciously of a subject he does not understand. After the hand has once acquired this delusive dexterity, the student becomes contented, and unable to execute anything correctly in future. Sir Joshua Reynolds remarks, that "young men have not only this frivolous ambition of being thought masters of execution, inciting them on one hand, but also their natural sloth tempting them on the other. They are terrified at the prospect before them of the toil required to attain exactness. The impetuosity of youth is disgusted at the slow approaches of a regular siege, and desires, from mere impatience of labor, to take the citadel by storm. They wish to find some shorter path to excellence, and hope to obtain the reward of eminence by other means than those which the indispensable rules of art have prescribed. They must, therefore, be told again and again, that labor is the only price of solid fame, and that whatever their force of genius may be, there is no easy method of becoming a good painter." In another place he justly observes, that "the first business of the student is to be able to give a true representation of whatever object presents itself, just as it appears to the eye, so as to amount to a deception;

and the geometric rules of *perspective* are included in this study. This is the language of the art; which appears the more necessary to be taught early, from the natural repugnance which the mind has to such mechanical labor, after it has acquired a relish for its higher departments." Also, in his first discourse, he says, "a lively and what is called a masterly handling of the chalk or pencil, are, it must be confessed, captivating qualities to young minds, and become of course the objects of their ambition. They endeavor to imitate these dazzling excellencies, which they will find no great labor in attaining. After much time is spent in these frivolous pursuits, the difficulty will be to retreat, but it will be then too late; and there is scarce an instance of return to scrupulous labor, after the mind has been debauched and deceived by this fallacious mastery."

We find in many of the drawings of Michael Angelo, Raffaele, and even Rubens, some portions carefully studied and finished with the greatest correctness from the model, some difficult passage which required labor and finish to overcome, or some portion of great beauty, which nothing but fidelity could represent. From the contemplation of the works of the great painters, we perceive a comparative dryness and stiffness in their earlier production, compared with their later pictures, we therefore are naturally led to conclude that we can accomplish by a shorter method what they have shown us to have been their aim: breadth, grandeur, and freedom of execution; it will be found, however, that though a few strokes by the hand of a master often express to his later works as much as the most careful finishing of his early pictures, yet that arises entirely from his having acquired, by long practice, a mastery over his materials, and, by long contemplation, a perfect knowledge of what are the leading features and peculiar character of every object.

Notwithstanding the foregoing remarks, careful drawing and minute finishing are to be regulated in a great measure by the nature of the work in hand, otherwise these qualities, excellent in themselves, are liable to be caught at, as an excuse for doing something which requires the least exertion of

the mind. Though it is absolutely necessary to be able to draw correctly whatever may be placed before you, yet it does not follow that the same labor is to be carried into the subordinate parts, otherwise a long portion of life might be spent in delineating the intricate ramifications of trees and plants, or in mapping out with painful fidelity the hedges and ditches of a whole county. The correctness of which it is necessary to be possessed is to be employed in rendering with accuracy the vital portions of all works, frequently leaving the minor passages to be filled up from our general knowledge and practice. How vexatious is it to see young men attending academies and museums, month after month, drawing from antique statues, in place of bestowing their whole care in giving the outline and form correctly, waste their youth in industrious idleness, in representing the flaws and excoriations of the mutilated marble, or in smoothly stippling in a surrounding mass of background!

(To be continued.)

NOTES AND PRACTICAL SUGGESTIONS.

BY A. M. DE SILVA.

(Continued from page 4.)

MR. CHADWICK in his excellent little work on the lantern, says: "Perhaps nothing could have enlivened the spirit of lantern exhibitions so much as photography." In turn, the lantern is capable of doing a good service for photography.

The photographers, especially the younger ones, possessing a lantern, will invariably seek out the choicest subjects, giving them a splendid opportunity of improving their taste; for, as Burnet has it, "the mind must have perceived its education through the medium of the eye, not of the ear, to enjoy the faculty of conceiving such ideas, or the power of tracing them to their original source in nature and art, as a test of truth."

The making of slides for the lantern, requiring as they do the nicest chemical excellence, is a splendid course of study in itself for the young photographer, scarcely ever becoming monotonous, on account of the many methods of making them, every

known process, with one exception,—the daguerreotype,—being capable of producing good ones. No more valuable present could be made to the young photographer; and it is something which will soon pay for itself in a studio, if only for exhibiting to patrons enlarged portraits, and thereby often securing orders for enlarged work.

As the lantern and photography have become so intimately associated, it will not be out of place here to add that a great deal of the success of the entertainment depends on the description of the pictures. Among the published lectures, none are more interesting, and more to the purpose, than the *Lantern Journeys* of the editor of this journal. Besides, they are among the best books to be placed on the table of the reception-room. Opened at any page, the reader becomes at once interested, and the stories being short, the reader does not feel the disappointment at being obliged to leave the subject unfinished, the period of "waiting their turn" consequently passing agreeably, and not seeming half as long as it would otherwise; thus proving beneficial to the photographer, it being next to an impossibility to secure a good picture of a subject who has "lost patience."

In the tinting of medallion portraits, unless the inner part of the cut-out be the least bit smaller than the outer one, it is rather slow work to get them to match accurately, nothing helping to spoil the appearance of the pictures more than a broken, patchy line either of white or dark. With the admirable little Robinson trimmer and guides, very clean cut-outs can be made rapidly; but unless two guides are used, one a trifle smaller than the other, it is necessary to use the shears to reduce the inner piece, whereby an uneven line is invariably produced.

I would suggest to the makers of this very useful tool to supply the *inner parts turned out when making the oval guides*; they would add greatly to its usefulness. With these, the masks for the *second printing* could be cut accurately, the shaving turned out by the lathe-tool leaving them just the desired difference in size.

Sunning the Bath Rapidly.—A way I have found not only expeditious, but ef-

fectual, especially during these wintry days, is to *filter the solution into a perfectly clean bottle, placed in the sunlight*, and as every bead passes downward, it receives the full benefit of the light, doing more service in a few minutes than days of sunning in the stereotyped way. Try it some afternoon, allowing the solution to remain at rest in the bottle until the morning, and you will see the result at the bottom of the vessel.

(To be continued.)

PHOTO-ENGRAVING.

PHOTOGRAPHY is an enterprising art-science. It always has "one eye open tight" for *business*. It is a willing helper to the other sciences and arts, yet it has an incisive way about it which guides it in looking sufficiently after its own interests. If there is anything for it to do, it is never modest about offering its services, and intruding them even, and wherever there is work that it *can* do as well as any kindred art it will make claim for its share always, and secure it too.

For a good while it has made effort to lend a helping hand in the production of engravings for the illustration of magazines, books, catalogues, and the thousand and one other things which the engraver's art is called upon to illustrate.

Many experimentalists at home and abroad tried to produce engraved blocks which could be used in the printing press with type, but they were met with more than as many difficulties, the greatest one being the inability to produce plates of sufficient depth. One after another, yet few in number, attained it, and since then the art of magazine illustration has steadily risen to a great height, so that our *Scribner's* and our *Harper's* particularly are magazines of art as well as of literature. Photography made this possible, and it would be a long chapter to tell of the many ways in which it is employed for this purpose. Our purpose now is only to explain how this matter comes home to us, and how our own art helps us in the study of others, by reproducing their masterworks, and, especially at this time, in giving us the reproductions of the original drawings, engravings,

and etchings of the immortal Burnet, as presented in his *Essay on the Education of the Eye*.

We have said that the number of those who have worked out this problem of photo-engraving is few; among them is Mr. Fred. E. Ives, of the Crosseup & West Photo. and Wood Engraving Co., No. 702 Chestnut Street, Philadelphia, to whose skill we are indebted for the greater number of the illustrations in our magazine, and especially in the *Essay* alluded to. As we progress—in future chapters—much of the finer work of these gentlemen will appear, and it will surprise those who understand it, by its exactness and excellence, nothing whatever of the charm of the originals being lost, though in some cases they are reduced in size to accommodate our pages.

These photo-engraved plates are, in brief, made as follows: A negative is made in the usual way, and from this a gelatin relief. From this relief the cast is made in plaster or other material, and from that again our printing plates are cast in metal, then mounted on wood, and they are ready for our use, and may be multiplied without end.

Much credit is due to the Crosseup & West Co. for the interest they have shown in this matter. They are gentlemen of true artistic feeling, and appreciate our art. For fifteen years they have made the greater number of the engravings which have appeared in our magazine, and are masters of their art. There are but few photographers who cannot add this photo-engraving branch to their business, more or less, and in their advertisement elsewhere these gentlemen make very liberal overtures to those disposed to try. We cannot give them a better record than the above, and examples of their work are ever before you. As the months go on you will see finer specimens.

We ought to say in closing that photo-engraving is confined to line work. Portraits, etc., from nature, negatives direct, cannot yet be made. Messrs. Wenderoth, of Philadelphia, Krueger, of New York, and many others have secured encouraging results in this direction also, but they are a long ways from being perfect examples in photo-engraving in half-tone without the subsequent use of the engraver's tool.

OUR PICTURE.

THE illustration in our present number bears with it no recommendation of "novelty," "striking effect," or "unusual accessories." It is simply an excellent example of plain portrait photography, such as is chiefly in demand in every photographer's studio, and which every operator should strive to excel in making. If a man can make first-class *plain* work, there is not much danger of his failing when the fancy touches are called for. The negatives were made for this issue by Mr. George N. Cobb, Binghamton, N. Y., and we will in his own words describe his mode of manipulation. He says:

"My operating-room is 20 x 33 feet, with a north light, 16 x 20 feet; lowest end of light, 8 feet from the floor, and highest point, 17 feet; side-light, 7 x 20 feet.

"I have boards one foot wide, separated about one foot, forming shelves on three sides of my light (outside) placed at such an angle as will keep the sun from shining in my operating-room, making it much cooler in the summer, and much pleasanter for the sitter, therefore do not use shades or curtains only when I need them to effect light and shades. I have opaque and semi-opaque curtains running both ways of the light. I make a good many negatives, and get good results without using any curtains. Hand- and head-screens I have not used for a long time.

FORMULA FOR COLLODION.

"Ether,	10 ozs.
Alcohol,	10 "
Iodide of Ammonium,	70 grs.
Iodide of Cadmium,	40 "
Bromide of Cadmium or Potas-	
sium,	40 "
Anthony's Negative Cotton,	100 "

"DEVELOPING SOLUTION.

"Sulphate of Iron,	2 to 2½ ozs.
Water,	1 quart.

"Use enough acetic acid, No. 8, when the developer is wanted to make it flow smooth.

"Negative bath, 40 grains strong; made slightly acid with C. P. nitric acid. Should this make the negatives too strong or intense, weaken the bath two or three grains per ounce of solution as the case may require.

"I find great economy in using very large

baths and plenty of solution, for making negatives, with a few inches in depth at the bottom of glass marbles to keep the dirt and settlings which may accumulate from mixing up with the bath every time a plate is dipped.

"After making negatives I put them in the rack to dry, and when I get ready to varnish take them down, and if they are too strong or intense wet them again with water, and then use the reducing agent until the required intensity is obtained. If the negative is too weak or lacks contrast, use the intensifying solution until the required strength is obtained.

"REDUCING AGENT.

"Liquor Ferri Sub. Sulphate or
Monsell's Solution, . . . 1 oz.
Water, 1 pint.

"In using this to reduce a negative, pour out, say, one-half ounce in a small vial and flow on and off, looking through the negative after each operation, until the desired strength is obtained.

"INTENSIFYING SOLUTION.

"No. 1.—Nitrate of Silver, . . . 10 to 20 grs.
Water, 1 oz.

"No. 2.—Plain Iron Solution, the strength usually used for developing negatives.

"To intensify or strengthen a negative wet the plate with water, pour on No. 1 solution and then back into the bottle, and then enough of No. 2 to cover the plate, and then rock the solution back and forth until the strength is as required. If not strong enough after the first operation, wash the plate under the faucet and then repeat the operation again.

"I do not think my formulæ or operating-room are different from many others, but find good results obtained in making a proper use of them.

"GEORGE N. COBB."

Here we have the method by which good plain photography is produced, in all its technicalities excellent, without any effort after sensational effect in any degree.

It is worthy of study. It is far better than a picture crammed with nameless and incongruous accessories, or made with a

high-price "diffusion or focus lens." Mr. Cobb and his amiable subject are entitled to our thanks for their patience together in producing for our use six negatives uniformly excellent and alike in every way.

The prints were made at our own printing-rooms, on the excellent paper supplied by Mr. G. Gennert, New York.

Next month look for another variety of work well worthy of study.

SOLAR PRINTING BY ARTIFICIAL LIGHT.

THERE was a time when the American photographer could boast of having so many days of clear blue sky per annum, that the occasional cloudy days which came caused him but little anxiety or annoyance. He could not understand why the inventive genius of the continent of Europe was continually exercised to perfect some means of adapting artificial light to the purposes of our art, and laughed at the idea of resorting to such a means. Now, however, the seasons have turned about until, in many sections of our country, the authorities tell us that as many as forty-three kinds of weather may be counted in one day, the principal varieties of which are anti-photogenic. This, or something similar being the case, must be the immediate cause of the many inquiries we have as to Mr. Edison's success in applying the electric light to photographic use, and especially as to the best means of printing solar enlargements by means of artificial light.

In response to this cry, so new to us, and now so loud, we have prepared what follows for the information of the suffering.

As to the electric light, that is now out of the question to the majority, because of its expense. True, Mr. Rockwood has not faltered at this, but he is the exception. For producing the electric light, both an expensive and elaborate electric machine, and a steam engine to run it, are required, besides other apparatus which is costly. When Mr. Edison succeeds in lighting our cities, he may turn his attention to cheapening apparatus for photographic use. Until he does, those who need to resort to artificial light must

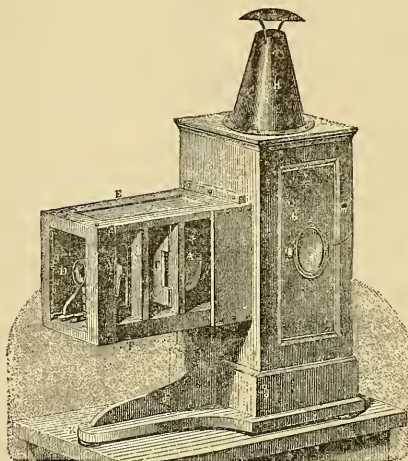
doubtless content themselves with the next best source of illumination, namely, the light produced by means of the well-known oxyhydrogen or lime-light, so generally used in magic lanterns. In fact, the requirements are, a magic lantern of good quality, the appliances for supplying it with light, and a solar camera of the ordinary construction, which the lime-light is to supply with the artificial sunshine.

In his admirable work, *Traite General de Photographie*, Dr. D. von Monckhoven, himself the inventor of the finest reflecting solar cameras in use, supplies us with drawings of the needful apparatus for solar printing by artificial light, and we cannot do better than to look to it for help now. First, then, let us describe

THE APPARATUS.

A box, *G*, surmounted by a chimney, *H*, or, in other words, the box of a magic

FIG. 1.



lantern, similar to the "Experimenters'" or "Photographers'" lantern, shown on pages 82 and 83 of our catalogue, edition of 1880, includes the blow-pipe and other apparatus necessary for producing the light. A triple system of condensers, say five inches in diameter, are placed laterally upon the box at *A*. To this the parts of a solar camera described are to be attached in the manner shown in the cut, so that the negative is at *O*, and the amplifying objective is at *D*.

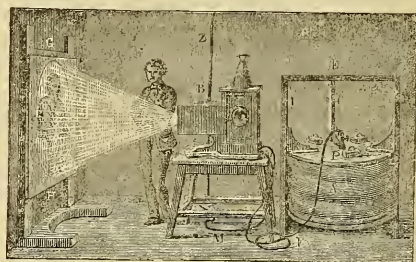
The blow-pipe should have its luminous point exactly in the focus of the condensing lenses. For this purpose the objective, *D*, is used as a guide, the luminous cone passing freely through it. By advancing the blow-pipe towards the interior lens, or by drawing it back, the brilliancy of the field may be considerably varied, and it is therefore necessary to pay particular attention to this point.

As the luminous point of the blowpipe is variable in the direction of the height, it is by means of the rack and pinion attached that the luminous point may always be brought on the axis of the apparatus.

All this is quite familiar to lantern operators, and although it offers no practical difficulty, should be studied by the photographer who would make use of this apparatus. As to the focussing and projection of the image, they are so well known that we will not stop to describe them.

The next figure represents the general arrangement of the apparatus in use, including

FIG. 2.



the gas-bags for the gases used, and all the connections necessary.

We next come to the

PHOTOGRAPHIC PROCESSES SUITABLE FOR MAKING ENLARGEMENTS WITH ARTIFICIAL LIGHT.

Such an enlarging apparatus as this may also be used with artificial light for making, with wet collodion, large negatives on glass, which requires an exposure of but a few seconds. What is our first consideration now, however, is its use in making directly from a small negative an enlarged positive on paper.

TO PREPARE THE PAPER.

Make the following solution :

Water,	1 litre (1 quart).
Tapioca,	10 grammes (154 grs.)
Iodide of Potassium, . . 10	" (154 ")
Bromide of Potassium, . 10	" (154 ")

First boil the tapioca with the water, and pass the liquid through a cloth. Then add the iodide and bromide.

The sheets are immersed one after another in this liquid, hung up to dry, and kept in a portfolio until wanted.

The paper thus iodized is made sensitive by plunging it in a silver bath, precisely as is done with the nitro-glucose paper described below. On coming from the bath, the sheet is hung up to dry. The dry paper is exposed in the enlarging apparatus until the intense blacks of the image commence to show. After developing with pyrogallie acid (see below), fix and dry.

In our August, 1878, issue, page 229, Mr. A. Hesler gives us an excellent method of producing solar enlargements by development, which may also be used with the artificial light. As many of our readers may desire to try something new, we also add Dr. von Mönckhoven's method of using

NITRO-GLUCOSE PAPER.

The invention of this process is due to the learned Doctor, who gave the first description of it, in 1865, to the French Photographic Society.

The nitro-glucose paper has very great advantages, he says, over the ordinary salted paper. It is possible to stop exposure at any time, continuing the print by development. Provided the image is slightly visible on the paper, it may be entirely developed, and this without difficulty. The developed image has as fine a tone as the prints obtained on the finest salted papers.

Nitro-glucose.—This substance is prepared by placing for five minutes in contact one part of pulverized white sugar, two parts of sulphuric acid, and one part highly concentrated nitric acid. This product, washed in hot water, is viscous, and adheres to the hands. Dissolved in alcohol, and added to the collodion, it produces no effect upon it. But if the alcoholic solution has been made

for several days, the collodion will lose some of its sensitiveness, and will gain in *intensity*. This is because the nitro-glucose has, by decomposition, become a body susceptible of combining with the nitrate of silver; thus, a solution recently prepared does not render turbid the nitrate of silver, whilst a solution several days old produces an abundant white precipitate, very sensitive to light.

Preparation of the Paper.—To prepare the paper, dissolve 50 grammes (771 grains) of nitro-glucose in 1 litre (1 quart) of alcohol. This solution is allowed to remain two or three months in a room heated to 30° Cent. (86° Fahr.), until there is an abundant precipitate of nitrate of silver, which is previously ascertained in a test-glass. The paper is dipped for one minute in this alcoholic solution, and then hung up to dry.

Salting.—The paper may be floated for about five minutes on the surface of the following bath :

Water,	1 litre (1 quart).
Chloride of Sodium, . . 20	grammes (308 grains).
Citrate of Soda, . . 20	" (308 ").

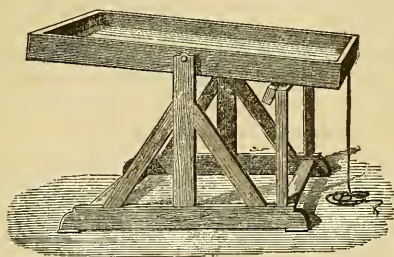
The paper is hung up to dry, and afterwards may be kept a long time without change. But we prefer *immersing* a large number of sheets in the bath, so that they may be well penetrated with the liquid. Notwithstanding this, the image is entirely on the surface of the paper, and not in the texture. Salting the two sides gives more depth to the image, renders the paper more sensitive to light, because it contains a larger quantity of salt, and does not expose the operator to error, if he has forgotten to mark the back of the sheet with lead-pencil, as is the case in the ordinary processes.

Sensitizing.—The sensitizing of whole sheets of 45 x 55 centimetres (18 x 22 inches), is made in ordinary dishes, but the sensitizing of sheets of 90 x 132 centimetres (36 x 52 inches), or 132 x 200 centimetres (52 x 79 inches), such as we frequently prepare, is more easily obtained by means of the following process :

The dish, instead of being on a horizontal table, is placed on two pivots (Fig. 3), and supported by a wooden stand. On the side is a frame, upon which the dish rests when inclined; then all the liquid flows to this side.

On the opposite side is a similar frame, which is not seen in the cut.

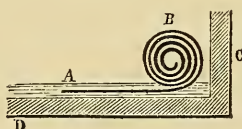
FIG. 3.



This dish, bottom and sides, is made of rough plates of glass, which are attached to a strong wooden frame with marine glue. We have one measuring 140 centimetres (55 inches) in width by 210 centimetres (83 inches) in length, weighing 500 kilos (1100 lbs.), and, owing to the pivots, it can be worked with great ease. A hole, closed by a glass stopper, is pierced in the bottom plate at one of its angles, so as to allow the liquid to run out after it has been used.

Before sensitizing a large sheet, we make it into a roll of a diameter of 5 centimetres (2 inches), then this roll is taken, towards the centre, between both hands, and immersed in the bath collected on the inclined side of the dish. The paper is unrolled in the liquid, and this operation may easily be done without assistance.

FIG. 4.



Air-bubbles cannot form, since the paper is unrolled in the liquid itself. It is well, if the sheet is very large, to but very slightly incline the dish, *CD*, so as to only immerse the lower portion of the roll, *B*, whose extremity, *A*, is constantly pushed forward by a brush held in the right hand, whilst the unrolling of the roll, *B*, is aided by turning it with the left hand in the proper direction.

In operating in the manner in which we have just described, a silver bath, occupying

in the dish no more than the height of half a centimetre ($\frac{3}{16}$ ths of an inch), is sufficient. When the sheet is completely immersed, and this should not last at the most more than twenty seconds for a sheet of 120 x 135 centimetres (47 x 53 inches), a slight see-saw motion should be given to the dish. Small waves are thus formed, which remove all the air-bubbles, and prevent any dry places on the paper which would evidently produce spots.

When the paper has remained five minutes in the bath, it should be removed, but if this was done in the ordinary manner, by raising the sheet by the corners, there would be danger of its falling by its own weight, and tearing.

A strip of wood is placed on one of the edges of the sheet, which is turned over on it, and to which it adheres; it may now be carefully removed from the bath. When out of the bath, the strip and edge of the paper adhere strongly, and the whole sheet may be raised without assistance, and without fear of tearing. The strip is then held by two clamps, and hung up to dry.

For sheets of 120 x 135 centimetres (47 x 53 inches), the strip should be 125 centimetres (49 inches) long, 2 centimetres (three-quarters of an inch) wide, and 8 centimetres (3 inches) thick.

The operations that are made in the glass dish are the sensitizing, developing, and toning.* But this dish should never be used with hyposulphite of soda, nor for washing the prints after fixing.

Sensitizing Bath.—

Distilled Water, .	5 litres (5½ quarts).
Nitrate of Silver, .	250 to 400 grms. (64 to 103 drachms).
Citric Acid, .	20 grms. (5 drachms).

This silver bath is, as may be remarked, strongly acid. In any event, the citric acid cannot be replaced by acetic acid, as the liquid would run in greasy streaks over the paper, forming irretrievable spots.

There is a slow precipitation at the bottom of the vessel containing this bath of a viscous body containing silver, therefore it is neces-

* Ordinary formula, and not the toning with hyposulphite, given further on.

sary to add, from time to time, 50 grammes (13 drachms) of nitrate of silver, and 10 grammes (2½ drachms) of citric acid.

Preservation of the Nitro-glucose Paper.—

When the paper is *completely dry*, it is rolled, and placed in a round pasteboard box. It may be kept for three days in summer and fifteen days in winter, but if care is taken to keep it in a place that is thoroughly dry, or in a box with chloride of calcium, it may be preserved whole months without becoming yellow.

Touching the sensitized paper should be avoided, for if the hands are not very dry, they leave a spot which afterwards would appear black on the image.

Exposure.—The nitro-glucose paper gives direct images, either in the pressure-frame or in the enlarging apparatus, and it is possible, as soon as the image is slightly visible on the surface of the paper, to stop the exposure and proceed by development. The first method is evidently the best, as it is the most direct. The nitro-glucose paper has neither right nor wrong side; the image, therefore, may be printed on any side that may be desired.

This paper requires harder negatives (but not foggy, however) than albumenized paper for ordinary printing or enlargements, as otherwise the prints would be gray, dull, and without vigor. But it has, for hard negatives, an immense advantage over albumenized paper. It is that the negatives do not burn out.

It is well known that if the negative is hard, the print on albumenized paper will also be hard, because it is not possible to push the exposure so far as to obtain details in the whites of the positive image, and that the black should not become metallic. This is not the case with the nitro-glucose paper, which allows the exposure to be carried as far as we please. The blacks, when they obtain their intensity, do not become darker, whilst the half-tones or details in the whites increase in proportion to the length of the exposure. It is this property, combined with that of producing beautiful prints by development, which makes the nitro-glucose paper so well adapted for enlargements.

Toning and Fixing the Direct Print.—
Prepare the following bath :

Rain-water,	5 litres (5½ quarts).
Hyposulphite of Soda,	1 kilo. (32 oz. Troy).
Chloride of Gold and	
Potassium,	2 grms. (31 grains).

In summer, the quantity of water may be doubled.

The chloride of gold and potassium is dissolved separately in a little water, and poured into the solution of hyposulphite, which is to be strongly agitated. The gold solution first gives a red color to the hyposulphite, but this disappears by agitation.

This bath, which will keep very well for several days in a cool place, may be used for a great number of prints.

The bath is poured into a dish of varnished wood, or even of zinc. The print is rolled, as we have previously said, and then rapidly unrolled in the toning bath, in which it should remain from ten to fifteen minutes in summer, and from fifteen to twenty minutes in winter. The print acquires in the bath a red tone, which in drying becomes violet. If in toning it should acquire a *blue tone*, it would be necessary to stop the action of the bath by plunging the print into water. The fixing is completed as soon as the print has remained for five or six minutes in the bath.

Tilting the dish so as to allow all the liquid to run out, the paper remains stuck to the bottom. Then the dish is entirely filled with water, which is frequently renewed for four or five hours; or the print is raised by means of the strip before mentioned, placed upon a very open canvas, stretched on a drying-frame, and washed by a sprinkler, returned, and dried. But it is better to sponge it after the last washing, and mount it whilst damp, as we will see further on.

Development of the Image.—If the exposure of the image has been stopped at any stage, it may always be developed, provided the image is visible on the surface of the paper. But the stronger the image the more rapid the development, for which two methods may be adopted.

First Method.—Prepare the two follow-

ing *filtered* solutions, which can be preserved without difficulty.

A—Gallic Acid, . . . 100 grms. (26 drms.)
Alcohol, . . . 1 litre (1 quart).

B—Acetate of Lead, . 100 grms. (26 drms.)
Distilled Water, . . 1 litre (1 quart).

In the large pivoted dish (Fig. 3), if the prints exceed 45 x 55 centimetres (18 x 22 inches), or in the ordinary porcelain dish for smaller sheets (but in all cases in a well cleaned dish), place as many litres (quarts) of distilled water as are required to cover the bottom of the dish with the liquid, to the height of half a centimetre (three-sixteenths of an inch).

For each litre of water, pour into the dish $2\frac{1}{2}$ c.c. (42 minims) of gallic acid (A), followed by 10 c.c. (3 drachms) of crystallizable acetic acid, and give to the dish an undulating motion, so as to well mix the liquid; after which add for each litre of water $2\frac{1}{2}$ c.c. (42 minims) of the lead solution (B). Again agitate the liquid, which, if the operation has been well done, will remain absolutely limpid, and will not become milky.

The exposed paper should not be washed, but should be made into a roll, if it is a large print, and placed in the dish in the manner already described, care being taken to keep up a slight but constant movement of the dish, so that the sheet may be always covered with the bath, otherwise large local spots would form.

At the end of a lapse of time which may vary from ten to forty minutes, according to the degree of exposure of the paper and the temperature, the image is developed, showing a splendid tone. The liquid is now allowed to run out, and is replaced by water, in which the print is allowed to remain for two minutes at the most.

The print, should it be large, is now raised with the strip,* and immersed in the gold fixing bath, as previously described.

With a little practice, it is possible to de-

velop the image with so beautiful a tone that no one can distinguish it from a print obtained directly. The *essential condition* for this is to make use of dishes that are *absolutely clean*; for this nitric acid is used. If the bath is turbid, the whites in the print will be dirty. The liquid should remain absolutely clear, and limpid as water.

It is better to make a few trials with prints of small size, which are printed at different degrees in the pressure-frame by means of an ordinary negative.

Second Method.—Immerse the print after exposure in the apparatus, and without previous washing, in

Distilled Water, . . . 2 litres (2 quarts).
Pyrogallie Acid, . . . 1 gm. (15 grains).
Citric Acid, . . . 10 grms. (154 grs.)

The image appears at first very slowly, but soon becomes stronger. As soon as it has acquired the desired tone, it is immersed in water for a few seconds only, and then in the gold fixing bath, for which we have already given the formula.

Whatever the mode of development used, it is well, if the sheets exceed the size of the double sheet of 55 x 90 centimetres (22 x 36 inches), to immerse but one print at a time in the bath.

But if the sheets are not large, a great number may be immersed. Generally, when using the first method (with gallic acid), we employ 4 litres ($4\frac{1}{2}$ quarts) of distilled water to develop at the *same time* four prints of 45 x 55 centimetres (18 x 22 inches), or *two* of 55 x 90 centimetres (22 x 36 inches). But in this case it is indispensable to keep the dish constantly in motion, otherwise the sheets in certain places come in contact, and in these places the development is unequal.

Mounting the Prints.—It is indispensable to wet all over the dried prints with a sponge soaked in water, before putting on the paste, otherwise it will penetrate the print in certain places, and rapidly spoil it by causing it to become yellow.

The best way is to stick the prints as they come from the last washing, after having removed the excess of water with a sponge from which the water has been well pressed.

There are no mounts for prints of large

* It is necessary to have separate strips for the silver bath, others for the development, and still others for the hyposulphite baths and washings. In all cases it is well to cover the strips with a thick gum lac varnish, to which is given different colors, so as to easily distinguish them.

size, but we may use frames covered with canvas, on the edges of which drawing-paper has been pasted, and whilst this last is yet wet, place the print, the reverse side of which is covered with starch paste; then by means of the sponge aid perfect adherence.

Varnishing the Paper.—To frame these large prints, it is not possible to find suitable glass. Instead they may be covered (before or after retouching) with a solution of gum arabic. When the coating is entirely dry, it is varnished as you would a picture. It may then, if desirable, be painted in oil simply by the application of some transparent glazing.

SOCIETY GOSSIP.

CHICAGO PHOTOGRAPHIC ASSOCIATION.—

A regular meeting was held in their rooms, 229 and 231 State St., Wednesday evening, January 7th, 1880. Meeting called to order at 8 o'clock, President Greene in the chair.

Minutes of last regular meeting read and adopted. A communication from the Bristol and West of England Amateur Photographic Association, calling attention to their proposed International Exhibition, was read and placed on file; the circulars of information, describing the character of work and prizes for competition, were distributed to the members.

MR. DAVIS.—I trust this invitation of our sister association in England will receive the attention it deserves, and that our society will recognize the contents and fraternal request by a generous contribution of work for competition, and, as the time is ample, a creditable display can be made, and I think we can count on some of those medals.

THE PRESIDENT.—I hope the remarks of Mr. Davis will incite some of our members to an immediate effort to produce work for exhibition as proposed. Two of our members, Messrs. Rocher and Smith, have won medals in competition with the best work of the old world; now I trust others of our Association will prove their skill.

Mr. Gentile exhibited a large number of the gelatin positives made by the Mumler process, used by the Photo-electrotype Company of Boston. The gelatin plates from which electrotypes had been made were ex-

amined with usual interest, and the superior excellence of the process allowed.

The Secretary stated that at a meeting in the early summer a quantity of Richardson's Ready-sensitized Albumen Paper was distributed, with a request that at some future time examples of its work should be returned and its value be determined. The returns have been slowly coming in, and at this meeting he would place before the members the results of the trials.

A quantity of prints were then exhibited, and passed a critical examination. In one case the paper had been kept five months before being used, and the prints shown were fully equal to the best made on any paper. It was the unanimous opinion of the members that the paper was a success, and all that Mr. Richardson claimed for it. It was especially valuable for amateurs and photographers who are doing little in negative work.

The Secretary read a letter from Mr. Scotford, of Lansing, Mich., stating he had sent the Association some of his gelatino-bromide dry plates, and asking that they be placed in the hands of a committee to test their merits. The plates having arrived, they were placed at the disposal of the society.

On motion regularly made, the Chair appointed the following members a committee to try the Scotford plates, and report at the next meeting: Messrs. Smith, Klein, Nellis, and Edgeworth.

MR. HODGES.—Will the Secretary please give us the formulæ and directions for these plates, as it will interest the members to know something about their manipulation?

SCOTFORD'S GELATINO-BROMIDE PLATES.

Precautions.—No camera box with sliding movement can be used *unless covered over with focussing-cloth*, during the time the plate is in the camera, and while drawing out the slide. Also, that the plates are sensitive to *yellow* light, but can be used cautiously under an *orange* light, bordering on red. Get the orange (envelope) paper and put several, that is two or three, thicknesses over your dark-room window. See that *all* actinic light is excluded.

Developer No. 1.

Distilled or Ice Water,	. . .	1 ounce.
Pyrogallie Acid,	. . .	2½ grains.

Developer No. 2.

Distilled or Ice Water,	. 1 ounce.
Liquid Ammonia Conc.,	. $\frac{1}{2}$ "
Bromide of Potassium,	. 60 grains.
Bromide of Ammonium,	. 30 "

Chrome Alum Solution, No. 3.

Chrome Alum,	. . . 140 grains.
Bichromate of Potash,	. 20 "
Distilled Water,	. . . 5 ounces.

To use, say for 5 x 8 plate, take 5 ounces pyrogallic acid solution (No. 1), into this put $2\frac{1}{4}$ drachms of chrome alum solution (No. 3), then drop in 50 drops bromide solution (No. 2), shake up, and it is ready; when mixed, it has a slightly milky-red color. When ready, put your plate in an 8 x 10 granite-ware pan, and pour the developer over it, keeping the pan in motion until developed, then place the plate in another dish containing water, 5 ounces; chrome alum solution, $2\frac{1}{2}$ drachms, and let remain about one minute, then transfer to dish containing hypo soda solution, saturated, 10 ounces, chrome alum solution 1 ounce. When fixed, place again in same chrome alum solution, used after the development, which will absorb most hypo left on the plate. Then transfer to another dish containing water, 20 ounces; chrome alum solution, 2 ounces; where it should remain five minutes. To make it dry quicker, flow over the plate common alcohol until the plate ceases to show lines, and the alcohol flows smooth.

Mr. KIHLMOLZ.—I noticed the formula for Kroh's rapid process in the *Scientific American*, and would like to bring it to the notice of the members and have it tested. It is as follows:

"To one kilogramme of iodized collodion add a quarter of an ounce (= 8.75 grammes) of the following solution: Absolute alcohol seventy grammes, and three to four grammes of isinglass or gelatin cut small, and dissolved by heat in a glass containing thirty-five grammes of distilled water; then add four grammes of iodide of potassium, and three grammes of bromide of ammonium, and when all is completely dissolved and filtered through a piece of linen previously thoroughly washed in alcohol, pour into a bottle capable of

holding about a kilogramme and a half. To a quarter of an ounce (= 8.75 grammes) of the above solution, add one kilogramme of iodized collodion, and shake thoroughly for eight or ten minutes; then add from eight to ten drops of acetic ether, and the result will be the so-called 'cheesy collodion.'

"*Remarks on the Foregoing.*—On the addition of the gelatin and iodine solution there is an immediate, though harmless, appearance of turbidity, and by this addition cotton is precipitated, but may be redissolved by diligent shaking. The iodizer—that is, the gelatin iodizing solution—may be varied according to the state of the light and the position of the studio. If powerful pictures are desired, the following should be used:

Iodide of Ammonium,	. . . 4 grammes.
Bromide of Cadmium,	. . . 4 "
Absolute Alcohol,	. . . 70 "
Distilled Water,	. . . 175 "

"If it be desired to work without intensification, and to have an extremely sensitive collodion, then take

Iodide of Sodium,	. . . 4.50 grammes.
Iodide of Lithium,	. . . 3 "
Absolute Alcohol,	. . . 70 "
Distilled Water,	. . . 26.25 "

"If the collodion be required to work rapidly, but not powerfully, then to 1 kilogramme of prepared collodion add 0.73 grammes of sublimed iodine. It is as well when pouring off superfluous collodion to let it run into a second bottle. Allow the plate to become *perfectly* dry before dipping it into the silver bath.

"*The development is effected by two developers, Nos. 1 and 2.*

Developer No. 1.

Distilled Water,	. . . 60 ozs. = 2.1 kilos.
Ferrous Sulphate,	. 3 " 105 grms.
Acetic Acid,	. . 3 " 105 "
Absolute Alcohol,	. . 4 " 140 "

Rapid Developer No. 2.

Distilled Water,	. . . 60 ozs. = 2.1 kilos.
Ferrous Sulphate,	. . 5 " 175 grms.
Acetic Acid,	. . 3 " 105 "
Absolute Alcohol,	. . 4 " 140 "
Oxalic Acid,	. . 4 to 5 grains = 0.36 gm.

"Developer No. 1 is applied cold. The

rapid developer requires that the ferrous sulphate, the water, and the oxalic acid should be heated and properly dissolved in a shallow vessel; when the solution has become cold the alcohol and acetic acid are added, and then the whole is filtered. After the exposure the plate is coated with developer No. 1; when the highest lights have been brought out it is poured off, and then the rapid developer is taken, which immediately brings out the deepest shadows. If soft pictures for intensification be required, then the rapid developer should remain a long time upon the plate, and a short time in the reverse case.

Fixing Bath.

Water,	. . . . .	10 parts.
Cyanide of Potassium,	. . . . .	1 part.

Intensifier.

Silver,	. . . . .	17.5 grms.
Distilled Water,	. . . . .	1 kilo. 35 "
C. P. Nitric Acid,	. . . . .	5 drops.
Pyrogallie Acid,	. . . . .	2.75 grms.
Citric Acid,	. . . . .	1.46 grm.
Water,	. . . . .	560 grms.
Glacial Acetic Acid,	. . . . .	17.5 "

"After drying, the plates which are not sufficiently powerful are varnished with common varnish, and then strengthened with the above intensifier. If the plates are blue after being well washed, they are coated with a solution of 5.5 grammes of cyanide of potassium in 350 grammes of water, to which from 5 to 8 drops of the intensifying silver have been added (and well shaken) until the surface becomes a bright yellow.

Silver Bath.

"60 grammes of iodide of potassium dissolved in 70 grammes of water; 25 grammes of nitrate of silver dissolved in 420 grammes of water; 8 to 10 drops of the iodizing solution given above; 2 drops of nitric acid.

"The bath may be used the second day. The photographer is recommended to prepare three silver baths, and to use a different one every day for three days, and then recommence, so that each bath is only used one day in three. In studios where from twenty to thirty sittings are given daily, six baths will be required. Time of floating, three minutes.

"The duration of the exposure should,

with a good light, be three-quarters less, and with a bad light a half less, than by other processes."

Mr. SMITH.—I see in his formula for rapid developer he uses oxalic acid; this is an innovation, certainly, for we are taught in our chemistry of photography that it is often formed in small quantities spontaneously in decomposed collodion, and is very probably one of the substances which render such collodions very insensitive. Oxalate of silver is feebly sensitive to light.

THE PRESIDENT.—I hope when the minutes reach you in the *Philadelphia Photographer* some of the members will try Mr. Kroh's method, and report their success.

THE SECRETARY.—I have a receipted bill from the editor for a year's subscription to the *Philadelphia Photographer*, and also acknowledge receipt of *Mosaics* for 1880, donated to the Association.

On motion, a vote of thanks was passed to Mr. E. L. Wilson for the same.

Mr. HODGES.—I wish to ask if any of our apprentices, who are not yet able to afford a subscription to the journals, have free access to these copies belonging to the society?

THE SECRETARY.—Yes; they are being loaned continually. I keep a book for the purpose, and any member, or any photographer's assistant, can secure them on application.

Mr. BIGDEN.—I move that when we adjourn it be for two weeks.

The motion prevailed.

THE SECRETARY.—I trust the large attendance here to-night will be augmented at the adjourned meeting by all who are in any way engaged in photography in our city, and I hope each member will take it upon himself to invite those of the fraternity whom he knows, and who are absent to-night. The next meeting, aside from its special interest in the report of the gelatino-bromide plates, covers the election of officers for the ensuing year, and we want every one to come and vote.

No further business appearing, on motion adjourned.

G. A. DOUGLASS,
Secretary.

An adjourned meeting was held on the 21st inst. for the purposes named above, in-

cluding the discussion of the project for the *Photographers' Association of America*. There was a large attendance, but the report has reached us too late for insertion. It will be given in our next. The following were elected as officers for the ensuing year: H. Rocher, President; William Shaw, Vice-President; J. Smith, Treasurer; G. A. Douglass, Secretary; Executive Committee, Messrs. Hesler, Davis, and Copelin.

PHOTOGRAPHIC SOCIETY OF PHILADELPHIA.—Stated meeting held Friday evening, January 2d, 1880, the President in the chair.

The President announced that the exhibition of lantern slides would be held at the hall of the Franklin Institute on Tuesday evening, 20th inst.

A number of matters appertaining to the Exchange Club were discussed.

Mr. Carbutt exhibited a number of negatives of the parade on the 16th of December last, made on his gelatin plates. The lens used was a "Dallmeyer's Rapid Rectilinear," 11 inch focus, stop *f*-11; exposure in every case less than one second. Brief as this exposure was, the negatives were fully timed, and admirable in quality.

A further meeting was held on Thursday evening, January 15th, the President in the chair.

After the minutes were read and approved, Mr. Corlies exhibited an admirable photograph of cattle, made on an emulsion dry plate in three seconds.

Dr. Seiler mentioned a new method of producing tinted photographs, in which the colors were first placed upon albumenized paper, which was then sensitized and printed in the usual manner, accurate register being secured by suitable means.

Mr. Leaming spoke of a recent call which he made upon Mr. Willis, the patentee of the platinotype process. He gave an interesting account of the establishment, and said that it was quite possible that Mr. Willis would favor the Society with a paper upon the working of the process.

D. ANSON PARTRIDGE,
Secretary, 1315 S. Fifth Street.

THE REAL GENUINE GENEVA LIGHTNING PROCESS.

WE have published so many "lightning" processes that our readers will be *struck*—with astonishment—if we give them another. We would not do so, therefore, were it not for the fact that the one we now propose to bring to their notice is, unmistakably and without doubt, *the* process which the impudent process-vender has advertised for some time back, first at a fabulous price, and now "on trial for a month" at almost anything the victim chooses to pay. We say this is the *original* process, because it was acknowledged by the vender aforesaid that the process he hawked was the discovery of M. Boissonnas, in Geneva, Switzerland. Moreover, we have published in these pages a letter from M. Boissonnas himself, making that assertion.

We did not, however, get what we publish below from one of the weary licensees, or from the conscience-stricken vender (who now wanders about without a vocation, causing us *une peur affreuse* every time we take up a number of the *St. Louis Personal Photographer*, his favorite stem-wound organ), but from a gentleman high in our art, who, when in Geneva, dealt with M. Boissonnas in person.

The gentleman we allude to is Mr. F. Gutekunst, the famed photographer of this city, who kindly gives us the letters of Mr. Boissonnas, published below, with the generous desire that we give them to the fraternity, and thus help to head off the further sales of a process that need not be paid for under the pretense of being secret.

Mr. Gutekunst tells us that Mr. Boissonnas made a portrait of him by his lightning process, and that he sat *ten seconds*! However, he had agreed to take the process at a price, and here is what was written out for him *literally*.

"GENEVA, the 21 August, 77.

"DEAR SIR:

"I give you here my formulæ, which want very clean produces, as water, silver nitrat., and other. I remain to your service, to any difficult which you could find anywhere in working my process.

Gun-cotton, Hopkins & Williams.

Waigh Gun-cotton, . . .	15 grammes.
Waigh Alcohol, . . .	450 litres.
do. Æther, . . .	550 do.

"Dissolve your iodide in alcohol, 10 grammes,—10 grammes salt in 100 grammes alcohol. Each iodide must be dissolved so a side, and after clean, filtered, or let rest. Take from each solution the proportions:—

Iodide of Ammonium, . . .	50
Iodide of Sodium, . . .	30
Iodide of Zinc, . . .	20
Bromide of Ammonium, . . .	20
Bromide of Cadmium, . . .	30
150 solution for 1000 normal collodion.	

"You weigh in a bottle 1000 grammes from your normal collodion, clean solution, and you add to it 150 grammes from the mixed solution of iodide and bromide. The iodide and bromide solution must not be weight, but measured in a graduated tube. The normal collodion must be weight; the iodide and bromide solution must be measured.

"You add a little iodide tincture, in order to make your collodion orange-red, and let rest two or three days.

Silver Bath.

Distilled Water, . . .	1000
Silver Nitrate, . . .	75

"You add a few drops of a solution of iodide of potassium. You shake, and you let rest to the sunlight.

"A silver nitrate, or distilled water, which combined together gives some soiled negative are not good.

"It is better to employ *neutral* crystallized silver, as much neutral and together. Silver bath which gives clean negatives without veil is in the best disposition. Silver nitrate, or silver bath which requires very much nitric acid for to work clean will never give good results.

"Better it is when the collodion is red and acid and the silver bath neutral, than collodion neutral and silver bath acid.

Developer for Children.

Water, . . .	1000
Sulphate of Iron, . . .	50 weight.
Acetic Acid, . . .	10
Acid Borique, . . .	10 weight.
Honey, half Honey, half Water,	
Solution, . . .	10
Alcohol, . . .	30

"Honey solution is made with half part water, half part honey; it pours easier.

Developer for Reasonable Persons.

Water, . . .	1000
Sulphate of Iron, . . .	60
Acetic Acid, . . .	60
Alcohol, . . .	30

Iron Intensifier.

Water, . . .	1000
Acid Citrique, . . .	5 to 6
Sulphate of Iron and Ammonium, .	60
Solution of Honey, . . .	40
Alcohol, . . .	60

Pyrogallic Intensifier.

Water, . . .	1000
Pyrogallic Acid, . . .	5
Acid Citrique, . . .	5
Alcohol, . . .	60

"From time to time I remove my silver bath in pouring into a few drops of a solution of cyanide of potassium. I shake the bottle very well, and let rest to the sunlight till it becomes dark. It is better to do from time to time a new silver bath than to persevere too long to employ the old one.

"All at your service, I am waiting the first result of your essays in order to answer to your questions.

"Yours truly,

"H. BOISSONNAS."

Not finding the above to be what it was represented to be, Mr. Gutekunst wrote to Mr. Boissonnas, and asked for the "latest improvements," such as would give the results so profusely promised by the sanguine agent of the electric element, the notorious (French?) Canadian, Lambert. In answer to this, Mr. Gutekunst received another letter, the genuineness of which we desire most fully to establish by reproducing its head and tail by the photo-engraving process, and attaching them in proper place, viz.:

PHOTOGRAPHIE INSTANTANEE
BOISSONNAS
GENEVE

MEDAILLES AUX EXPOSITIONS
DE
CALCUTTA 1872
LYON 1872
NEW-YORK 1874

Geneva the 9th of August 73
Dear Sir —

I answer to your kind letter
giving to you my last improvements

"and begging you, after having tried them, to write me what for difficults or results you obtain, in order to try to help you as much as possible to arrive to the extreme rapidity which I obtain regularly. I do so, I employ gun-cotton, high temperature, from Mr. Guillemot, 6 Rue Choron, Paris, which is very good.

Gun-cotton, . . . 10 to 12 (10 is enough).
Alcohol, . . . 400 } 900 cub. cent.
Ether, . . . 500 }

"I make solution 10 salt, 100 alcohol, let stand to filter, and take from the clean solutions,

Iodide of Ammonium, . . . 45 cub. cent.
Iodide of Cadmium, . . . 40 "
Double Bromide of Cadmium
and Ammonium, . . . 35 "
(In full, 120 cubic centimetres.)

"For to do the double bromide of cadmium and ammonium, I weigh 6 grammes bromide of cadmium, 4 grammes bromide of ammonium; in full, 10 grammes salt for 100 cubic centimetres alcohol; that quantity of iodizing solution for the over given solution of normal collodion. It gives, in full, 10 grammes cotton, 500 alcohol (from which 100 cubic centimetres from the iodizing solution), 500 ether. Or, very good also,

Iodide of Ammonium, . . . 25 }
Iodide of Sodium, . . . 20 }
Iodide of Cadmium, . . . 40 } 120.
Double Bromide of Cadmium
and Ammonium, . . . 35 }
Silver Bath, . . . 75 grammes.
Distilled Water, . . . 1000 "

"Iodized with 5 drops of a solution in water

Of Water, 100 (100).
Iodide of Potassium, . . . 4 }
Iodide of Cadmium, . . . 5 } 10.
Iodine Tincture, 1 }

"Make aside a solution of

Acetate of Copper, . . . 100 }
Water, 1000 } 10 per 100.
Acetic acid enough for to aid to the dissolution.

"Boil; let cold; filter; keep in bottle.

"You make so your developer. In a bottle you put

Water, 900.
Sulphate of Iron, 50.

"You dissolve, and add

Acetic Acid, 20 to 25 c.c.
Solution of Acetate of Copper, . . 35 to 40 "
Alcohol, 30.

"It will veil immediately. Will be better the afternoon or the day after. Wants to be tried, for the most favorable moment. Keeps itself good four to six days; will become red; can be employed for intensifying with a few drops of nitrate of silver.

Intensifier.

Solution of Pyrogallic Acid in
Alcohol, 10 to 100.
Water, 1000 c.c.
Alcoholic Solution of Pyrogallic, 50 "
Solution (10 to 100) Citric Acid
in Water, 20 "

Employed with a few drops of nitrate of silver.

"Try; keep secret to you, and write me often. I shall always answer, with pleasure, to your letters, and should like very much

to conserve with you a kind correspondence. Tell me from your side what comes to your acknowledging which could be employed or tried favorably in order to overgrow the rapidity. I remain, forever,

"Yours very truly,

H. L. Boman

"Perhaps, later, shall I have still good news to write to you."

The whole of the great original lightning process is now undoubtedly before you. We cannot vouch for its value. We have looked upon it as a humbug from the beginning, and believe it is one yet. But if those who are still tempted by the claims and offers of the process-vender, may be saved from wasting their money, we shall be glad of the space we have devoted even to a humbug. We have kept our promise fully after all.

The whole of the original letters above may be seen at our office.

GERMAN CORRESPONDENCE.

Baryta in the Negative Bath—The Reducing Action of Different Kinds of Pyro—The Ferro-oxalate Developer—The Gelatin-emulsion Plates—Intensifying the Same—New Emulsion.

WHILE discussing about the defects of the silver bath, at a meeting of our society here, an expert suggested to add nitrate of baryta, in order to cause an indifferent bath to produce effective plates. I tried this addition of baryta more than twelve years ago, when I had a bath which had been spoiled with sulphate of saltpetre, and in consequence discharged in the cold crystals of sulphate of silver. I precipitated the sulphuric acid with nitrate of baryta, which left, of course, a little residue of the same in the bath; and, in fact, I obtained a negative with very intense lights, which made me believe the bath to be admirably adapted for reproductions of line drawings. The experiment, however, showed the contrary to be the case. A minute examination and compari-

son with a bath free of baryta established the fact, that while the latter does not produce such intense light, it produced, instead of that, intense shades—that, in fact, it was more sensitive to weak light.

Now, in reproductions, the light is very much weakened, as it is necessary to use the screen very liberally, which is the reason that such unsatisfactory results only are obtained. Owing to the inferior sensitiveness of the baryta bath for shades, the same is not to be recommended for portraits. This example shows how easy it is to err, even for old practitioners, if they rely only upon the immediate results of the observations they make, without comparing their experiments. Such examples are not rare in photography. Only the other day the cry was raised in England that English pyrogallic acid in developing dry plates, produced negatives of more intensity than the German acid, and an experiment was even quoted, in which the former had reduced more brome-silver than the latter in an equal period of time. These statements induced me to make careful comparative experiments, and I found that, under exactly the same conditions, in experimenting (equal quantity of brome-silver, pyrogallic acid, ammonia, etc.), the English pyrogallic acid reduced $74\frac{3}{4}$ per cent., while the German acid reduced $78\frac{1}{2}$ per cent. of the brome-silver, thus establishing the greater degree of reduction-power of the latter, which fact is also corroborated in photographic practice.

Of late the use of pyrogallic acid in developing the dry plates has been much restricted by the employment of oxalate of iron and ferro-oxalate of potassium. This preparation, which was first recommended by Lea, has been successfully used already in England for gelatin plates, while it failed with collodion bromide plates. Also, here in Germany, this developer has been repeatedly tried, but was always relinquished again on account of various defects; but now, that excellent photographic chemist of Vienna, Mr. Eder, has tested this developer very thoroughly, and he publishes a very simple method to prepare the same, which will make this preparation popular in a very short time. Eder takes: (A.) 200 grammes bioxalate of potassium dissolved in 1000

grammes of water, and neutralizes in carbonate of potassa. (B.) 100 grammes sulphate of iron, dissolved in 300 grammes water, adds 2 to 3 drops sulphuric acid. $2\frac{1}{2}$ to 3 volumes of the solution A are then mixed with one volume of the solution B, and to every 100 cubic centimetres 5 to 10 drops of a solution (1:10) of brome-potassium are added. If a permanent yellow precipitation is formed, there is not enough oxalate of potassa; and, if more is added, the precipitation is dissolved. If, instead of the neutral, the common acid oxalate of potassa is employed, a permanent precipitation is formed, with an ineffective liquid resting on top of it. This method of preparing the oxalate developer is much preferable to the old one.

Formerly it was necessary to warm the solution of neutral oxalate of potassa, add the ferro-oxalate, filter, let cool off, etc., all of which tedious operations are now avoided by Eder's method, and not the least agreeable feature of the new process being the fact that it is not necessary to prepare fresh developer for each plate, as with pyrogallie acid, but that the same quantity of developer is sufficient for the whole day to develop twelve to twenty-four plates.

The negatives obtained with oxalate of iron are totally devoid of fog, while the gelatin plates obtained with ammoniacal pyrogallie acid often are completely covered with a yellowish tone, which sometimes retards the printing very much. The adding of brome-potassium serves only to prevent the formation of fog, and not more than is necessary ought to be added. One-tenth per cent. is sufficient.

When drawings are to be reproduced, in which very clear lines are of main importance, to 100 c.c. developer up to 5 c.c. solution of brome-potassium may be taken.

Eder also proved that the oxalate developer may contain a little excess of oxalic acid, in which case it develops clearer, and needs less brome-potassium. He then also experimented on collodion emulsion plates, and found that they, if prepared with an excess of silver, form invariably fog, while with those prepared with an excess of brome-potassium, the oxalate developer could very well be employed.

If I write rather much to-day about dry gelatin plates, I do so because the same commence now in earnest to take an important part in the portraiture branch. During the horribly dismal and dark days preceding Christmas, it was often positively impossible to do anything with the wet plates, and then the highly sensitive gelatin plates came to the rescue quite in season. On quite dark and foggy days Schaarwächter here made with them *cartes-de-visite* portraits in twenty seconds, while with the common wet process, it would have taken at least two minutes.

An appropriate intensifying method for gelatin dry plates is still wanting. Until now quicksilver as a means of intensifying has been found to work best yet, but unfortunately it is very difficult to find the right intensity of the same in dry plates; furthermore, it was observed that the plates lost the mercury-salt only very slowly in washing, and the remainder makes the plates so intense that they can scarcely be printed.

The other day Mr. Edwards, in England, proposed a mercury intensifier, which does not color the plates yellow but intensely brown-black. He recommends:

Chloride of Mercury (1:50),	20 parts.
Iodine-potassium (1:10),	$6\frac{3}{4}$ "
Hyposulphide of Sodium (1:8),	$6\frac{3}{4}$ "

The solution of mercury is mixed with the solution of iodine-potassium, which causes a thick, red precipitation of iodide of mercury to be formed. If the hypo solution is added now, the liquid becomes clear, or partly clear. Gelatin negatives become intensely dark in this solution, and assume a very agreeable color. Of course, they have to be washed thoroughly afterwards.

I have found the solution very effective, but I prefer to use five times more solution of iodine-potassium than stated above. The red precipitate is dissolved with the excess of iodine-potassium, and if hypo is added, a perfectly clear liquid is obtained. It is a question of time, however, whether the plates intensified in this manner keep better than those intensified with chloride of mercury or iodide.

Unfortunately, it is not to be denied that the gelatin plates, in spite of their surprising

sensitiveness, have many defects which offer a serious drawback in working with the same.

In the first place, the preparation of the solution takes whole days, and plates take often several days to dry in moist weather. At the same time they are very easily spoiled.

About the difficulties encountered in intensifying I have spoken already. The fixing and washing take up much time, and often enough the layers are therein detached from the plate, or get wrinkled. I have therefore hunted for a long time, for a substance which would produce an emulsion of the same sensitiveness as the gelatin emulsion, without having the above enumerated defects.

I think I have succeeded, at last, in obtaining an emulsion which flows just as easy as collodion emulsion, dries already in one hour in a well heated room, is developed, intensified, fixed, and washed just as easy as a collodion plate, and adheres very tight to the glass. I believe that this interesting substance, with which I have been experimenting now already a quarter of a year, shall be more fully appreciated than the gelatin emulsion.

In the new year, I hope to be able to report more fully on this subject, and send now my best wishes for 1880 to my friends on the other side of the ocean.

Very truly yours, H. VOGEL.

BERLIN, December 31st, 1879.

Editor's Table.

PICTURES RECEIVED.—From Mr. WELL G. SINGHI, Binghamton, N. Y., cabinet and panel samples of his work; also a local newspaper, in which we find a very flattering notice of Mr. SINGHI's studio and pictures. The specimens now before us are good proof that the testimonial is well deserved. Mr. SINGHI is well known among photographers as an active, energetic man, always ready to welcome any improvement in our art. He continually keeps his rooms supplied with all the newest style of accessories for making popular pictures. His pictures are clear, sharp, and full of detail. A three-quarter figure of a gentleman, in our estimation, is the finest of the lot. The finishing (on which so much depends) is done with the utmost neatness.

On overlooking our mail matter the other morning we were amazed at perceiving an immense newspaper, the *Pioneer Press*, Winona, Minn. Our first exclamation was, "Who could have sent this enormous thing, as though we had not enough reading to do without it?" But, on looking it over, we found, on the *fifteenth page*, a flattering notice of Mr. ELMER TENNEY's photographic rooms. Mr. TENNEY also deals in photographic stock, and is prepared to fill orders in his section at New York prices. A still *greater* surprise, however, came from further west a little later, in the form of a copy of the *Rocky Mountain News*, Denver, Col. On page *twenty-five* of this vast sheet we found an article headed "The Leading

Photographers of Colorado," which gave a full description of the rooms of Messrs. BATES & NYE. The same mail brought us what gave more pleasure, and suited our taste far better, viz., a beautiful lot of pictures from the above-named firm. The gem of the collection was the little three-year-old AMY BATES, daughter of Mr. BATES. Next was a group of two little girls, twins. The subjects were all very pretty and happily chosen; chemical manipulation excellent; lighting and posing very skilfully managed. In fact, the whole collection throughout is admirable, and the printing and finishing all that could be desired. Looking backward for a moment, we are astonished that such work should come, not from the far West only, but from all parts of the country, when ten years ago the best galleries in our leading cities could not turn out pictures that in any respect equalled these of to-day.

PHOTOGRAPHIC PICTURES.—We have received from Mr. F. GUTEKUNST some specimens of his portrait work by this process, and we must say, in our judgment they are the best samples of mechanical printing we have seen. In color, quality, and general appearance, they compare more favorably with silver printing than any of its many rivals that have risen to drive it from the field during the last year or two.

These pictures are not *artotype*, but *phototype* prints, made by a process Mr. GUTEKUNST ob-

tained in Europe, and in working which he is untrammelled by the restrictions and annoyances to which *patent licensees* are so subject. Mr. GUTEKUNST has a steam press in his building in constant operation. Some specimens of his printing on satin are beautiful. During the late "GRANT Reception Procession" thousands of white satin badges were worn with Gen. GRANT's portrait printed on them by Mr. GUTEKUNST's phototype process. One of the examples before us is a bust of the eminent and venerable actor and elocutionist, JAMES E. MURDOCH.

DOUGLASS, THOMPSON & Co.—We have received from the new firm of DOUGLASS, THOMPSON & Co., Chicago, Ill., their first price-list, for 1880, of photographers' supplies. Also, their circular and bargain-list sheet.

The energy, push, snap, and promises, all denote that the firm is young and ready for work. They tell us already many new customers have been added to those who were on the books of the old firm. We are glad to hear of this success, and hope it will continue to increase until our friends are overrun with orders and customers. A new and striking feature in the arrangement of this stock-house is that of a photographic library and reading-room. Mr. DOUGLASS tells us an entire room is devoted to this purpose. On its tables are found all the photographic journals and magazines as they are issued. Here hungry photographers may sit down and feast their minds with delectable information on every subject. This is a most excellent plan, and we wish more of our stock-dealers would follow it up.

And now, to speak a good word for ourselves, and to show that we are not forgotten by our brethren out West, we must here thank Messrs. DOUGLASS & THOMPSON for the large clubs of new names they have already sent us.

THE HELIOTYPE PRINTING Co., BOSTON.—No doubt the greatest sufferers at the late fire in Boston were our friends of the Heliotype Printing Company. Theirs was undoubtedly the most extensive photo-mechanical printing establishment in America, and perhaps in the world. Think, then, of all their seven years' accumulation of, say, 25,000 negatives, transfers, relief plates, forty to fifty presses from all parts of the world, lenses, apparatus, and stock, being so utterly destroyed in a few hours, as not to leave so much residue as one month's "silver savings" from a country gallery. And yet these gentlemen are already at work actively again, and announce themselves ready and able "to fill orders

at once." Their *processes* were not burned—neither was their pluck nor their enterprise, so you can continue to forward your orders to them for all classes of photo. work, including artotypy, and be supplied promptly. The new location is at Nos. 124 and 126 Pearl Street, Boston, Mass.

A new price-list of card stock has been received from Messrs. A. M. COLLINS, SON & Co., No. 513 Arch Street, Philadelphia. These gentlemen are again under full sway, and filling orders with reasonable promptness. The old styles are adhered to, and many new ones introduced.

MESSRS. C. H. CODMAN, M. A. HOGAN, and W. H. ROBEY have succeeded Messrs. G. S. BRYANT & Co., 34 Bromfield St., Boston. Two of these gentlemen were members of the old firm. Mr. ROBEY has been salesman there for ten years; so no commendation from us is needed. They have our best wishes. They have the largest stockhouse in New England.

We have lately received from Mr. JAMES H. SMITH, stockdealer, Quincy, Ill., his new illustrated catalogue and wholesale price-list of photographic goods, frames, mouldings, albums, brackets, etc. His line of goods is full and varied, and prices reasonable. Give him a trial.

THE January, 1880, price-list of CHARLES COOPER & Co., New York, has been received.

We learn with regret that Mr. A. A. BALDWIN, Hinsdale, N. H., has recently been burnt out, and suffered the total loss of all his property, barely escaping with his life. We hope he will soon be started again in business, and with better success.

We have just had the pleasure of receiving a visit from Mr. J. E. WATSON, Detroit, Mich., samples of whose work will probably embellish our April number *Philadelphia Photographer*.

Mr. WATSON is the gentleman who sent us the pictures of the "Fisher Boy" some months ago. At the time we noticed the pictures, and expressed a desire to be able to place them before our readers. The result was, Mr. WATSON kindly offered to make some more negatives of the same subject. These are now in our possession, and shall be used in due time.

We forgot to state in our notice of Mr. LACER's pictures, last month, that they were sent by Mr. S. D. WAGER, operator, to whose skill the excellencies described are due.



E. J. HOLFELD.

MYSTIC RIVER, CONN.

T H E

Philadelphia Photographer.

Vol. XVII.

MARCH, 1880.

No. 195.

Entered according to Act of Congress, in the year 1880,

By EDWARD L. WILSON,

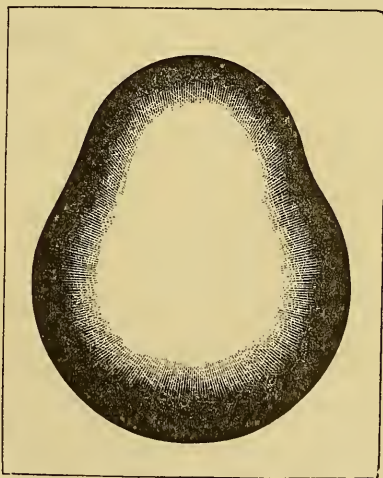
In the office of the Librarian of Congress, at Washington, D. C.

OUR PICTURE.

OUR embellishment this month is of a style that, after all that is said and done, is one of the most beautiful for portraiture. Of course, all other styles have their advantages, upon which we shall not now speak, but since a photograph of a person is generally expected to be a portrait and a likeness, and since the head is the all-important part of the body, the vignette picture, showing as it does, to the best advantage, the head well set upon a good pair of shoulders, is rightfully a most popular and desirable style. Still it is almost neglected by some parties, really because of their inability to produce it effectively.

All know that for vignette portraits a dark, plain background will not do. We speak now of the ordinary bust picture. For these the background should be light—not white—and the printing requires good taste on the part of the printer. The shading should not be intense nor abrupt, but gradually blended from the image outward in the softest manner possible. To secure such an effect, a properly constructed vignetting device is essential. Many efforts have been made to secure such a device, and the results of some of them—patented inventions—are clumsy, and as complicated as an electric machine. They have been all thrown aside by the best printers, and one of the

simplest, but the most effective, device taken up in their place. We refer to the Waymouth Vignetting Papers, than which there is nothing better for the purpose. The beautiful picture, tastefully vignetted, which accompanies our present issue, is an example of their work. Nothing more could be desired, for the vignetting is perfect and most satisfactory. It is soft and gradual, and adds character to the whole picture. How it was managed we leave for others to explain who constantly use the Waymouth Vignette



Papers, including our excellent printer, Mr. H. A. Webb, the foreman of our printing-

rooms, who, with others, elsewhere describes the various means employed for adjusting and using these papers.

The drawing is a minute diagram of one shape of Mr. Waymouth's invention. The "paper" proper consists of a finely graded lithograph design upon a punctureless tissue-paper, made for the purpose, and is made of nineteen various sizes, to suit from cards up to 8x10 portraits. Again they are of black and red and yellow bronze, to supply varied intensities, as the negatives used vary. These printed tissue-papers are mounted upon non-actinic sheets of heavy paper, with openings to suit, with sufficient margin to cover the size of negative for which they are intended.

We have no hesitation in pronouncing them the *best* vignetting device there is; easy of application for all sorts of plain and fancy vignetting. They have heretofore been made of both oval and pear shape, but as the latter seems most in demand, and as the stones bearing the designs were destroyed when the factory of A. M. Collins, Son & Co. was burned, the new stones will all be pear-shaped designs, and the oval ones discarded.

All sorts of fancy vignette printing may be done with these papers, to suit any negative and any taste. We refer you to what is said about them by those who are skilled in their use.

The negatives used by us are from Mr. E. A. Scholfield, Mystic River, Conn., who kindly writes concerning his formula as follows:

"The formula I use I cheerfully send you; my collodion is as follows:

"Ether and Alcohol, . . . equal parts.
Iodide of Ammonium, . . . 5 grs. to each oz.
Bromide of Potassium, 2½ " " "
Climax Cotton, . . . 4 to 5 grs. to each oz.

"I first dissolve the iodide of ammonium in the alcohol, then dissolve the bromide of potassium in the least possible quantity of water, and add to the alcohol and ammonium; after this I put in the cotton, and let stand over night; in the morning I put in the ether, and shake until the cotton dissolves; the collodion is ready for use in about a week. My negative bath I make forty grains strong,

and slightly acid. My printing bath I also make forty grains strong, with a few drops of ammonia added. I silver two to three minutes, and fume fifteen minutes. My toning bath is the old bichloride of soda bath; fixing in a good round handful of hyposulphite of soda to about three pints of water; fix from ten to fifteen minutes, keeping the pictures in motion.

"The Waymouth Vignette Papers I have never used, but I can see no good reason why they are not a good thing."

THE LATE GEORGE WHARTON SIMPSON.

ANOTHER of the small number who look after the interests of our art in a literary way has been called upon by death to lay down the pen, even "in the harness," for on the evening of January 15th, George Wharton Simpson, Esq., died of an apoplectic fit, just a few hours only after he had completed the work on the weekly issue of his magazine, dating a day after his death.

He was known all over the world for about twenty years past as the editor of the *Photographic News*, published weekly in London. He was well known to the majority of our readers as our London correspondent for a great many years, and they will thus know him no more. He leaves a large circle of literary and photographic acquaintances, and an enduring monument in the volumes of his magazine, his year-book, his manual of the carbon process, and his work on the collodio-chloride process, works of inestimable value to our art and its votaries. A man who attempts to keep pace with the growth of an art like ours, and to issue a weekly record of its progress, does not find much time for actual experiment, or practice, or for personal research, hence Mr. Simpson does not leave a brilliant record as a discoverer, yet he was one of the most indefatigable laborers in the interests of photography that ever lived, and there were few only who were better informed concerning it in all its wondrous details. It was his life-work; he was devoted to it, and he died in its service. We knew him personally, and for many years had intimate correspondence with him. We all regret that one so

useful should be cut down so early, for he was barely fifty-five years old. But as the plate is sometimes weakened and destroyed by over-development, so was our friend weakened and wasted by overwork and faithful devotion, and he died in the service.

He had once been in America, previous to his photographic career, but aside from that was not much of a traveller. He belonged to many literary and photographic societies and clubs, and organized several of them.

He leaves a second wife and one daughter, the wife of Mr. William Black, the novelist. He was buried on January 20th, and was followed to the grave by a large number of the photographic fraternity.

Thus another of the useful men of our art is taken. Would that we could all leave such a record of goodly service after us.

HOW BUSINESS IS, AND WHAT OF IT.

RESPONSES TO OUR CIRCULAR LETTER.

(Continued from page 39.)

FROM A. B. PAXTON, OREGON.

IN answer to the questions in circular letter, page 334, November number, I will answer briefly:

1. Business is dull throughout Oregon; reason, partial failure of our main dependence, the wheat crop, on account of rust. It does not improve much, and will not until another crop is harvested.

3. I show proof from untouched negative without toning, fixing, or mounting, merely printed dark enough to show shade of picture. I used to tone, mount, etc., but many took advantage of me, and after getting several proofs concluded to give up, as they had all the pictures they needed, and so I got no pay. I explain that the proof will blacken on exposure to strong light; that it is only to give an idea of position, etc., and I find that my plan works well.

4. I secure pay in advance; when negative is taken I produce my book, take the name, and ask for pay if they do not offer it. I have several notices in large letters about the rooms, "Photographs must be paid for when sitting is made;" "Pictures

not printed until paid for," etc., and nearly all pay attention, and do not ask credit.

5. Yes; and am trying to improve on every picture I take.

6. Yes.

7. I have no low-priced, nor any kind of competition very near; some travelling gem galleries during the summer months; they do supply a certain class, who *might* get better work but for the gems.

8. Yes; I generally make two or more sittings where good photographs are wanted for gems (for I have to take them), but one sitting.

9. Yes, public taste has vastly improved, and calls for better and more artistic work.

10. Cabinet size and bust vignette; though I take a good proportion of plain bust, dark ground, lighted *a la* Rembrandt.

11. Some call for fancy grounds, accessories, etc., but not one-fourth of the work is such.

12. I claim that retouching, carefully and artistically done, is a *real* improvement; also, burnishing, for all sizes from cabinet down, but not for larger sizes. If by fancy printing is meant marbled borders and such, I say no to that, and I have done none of it.

13. I have reduced prices, because I thought them too high, viz., \$7 per dozen for cabinet, and \$5 for cards, etc. I now charge \$4 to \$6 per dozen for cabinets, \$6 for large head, well touched vignette, \$4 for standing, plain, etc., and \$3 to \$4 for cards; one gem, 50 cents; four bon-tons, \$1; two cabinet gems, \$1, etc.

My paper is full; I hope to see something practical on emulsion soon, and wish you all prosperity.

FROM J. P. SPOONER, CALIFORNIA.

Let me answer your questions on page 334 of November *Philadelphia Photographer* as follows:

1. Business always fair with us; has improved for six months past.

2. Prospects for coming season were never better.

3. Proofs we show rarely, and only from negatives unretouched.

4. Pay in advance every time, unless very well known to be good pay.

5. To improve quality of work is our continual study.

5. Appreciation seems to be given us by continual orders of good size.

7. Low-priced competition from this on will, we fear, always exist, as dozens of poor fellows *must* have bread and butter. But no lasting damage seems to come to energetic photographers.

8. We make negatives till we *ourselves* are satisfied; rarely more "choose ye yourself," but we finish to suit *ourselves*.

9. The taste of the public is elevating yearly, and correspondingly exacting.

10. Popularity of size and style depend, we think, mainly on the *salesman*.

11. Fancy backgrounds and accessories we try to furnish "all they want," and that amount depends on the brains of salesman, who should be a practical photographer; it does seem impossible to be successful with any other.

12. It is our fear that we are *not* among the *real* improvement boys; though to be such, every one who knows us will admit that we have tried, but do not seem to elevate ourselves as we should.

13. Prices are about the same as the past nine years. We cannot make a very great reduction, unless we reduce quality of picture; that is *poor enough*, and cannot sell at all if poorer.

Thank you for these questions.

FROM GEORGE N. MOORE, WASHINGTON TERRITORY.

Perhaps answers to your questions on page 334 of the *Philadelphia Photographer* for November may not amount to anything from a community so far removed as this, but I consider it a duty for each and every one to do all he can to elevate the status of our profession, so here goes:

1 and 2. Business is dead, and we expect no improvement for six months, as this is the rainy season. Eight months rain!

3. No proofs. System: Cash down (when we can get it); otherwise, otherwise.

5. Well, perhaps so. Last summer we introduced boudoirs, panels, and glacé; have not had an order.

6. Yes, reasonably so; although they cling to old styles.

7. There are several cheap Johns about, but little damage done.

8. Always make two or more sittings, and generally take my own choice.

9. Yes.

10. Cabinets are in greater demand than cards; style, plain bust. I am trying to make them appreciate vignettes, bust, and three-quarter length.

11. Yes, they take very well.

12. Yes; could not get along without some retouching; never retouch excessively; do not like it myself, and will not let my patrons have such work; bad policy.

13. Reduced prices last July, hoping to improve business, but it did not; made no more sittings, and did not have so much money; raised prices again on the first of this month.

I believe it to be every man's duty to keep his prices as high as possible, and strive always to improve the quality of his work. Never allow a picture to go out that he will be ashamed to see afterward. Be your own judge of the quality of your work. Yesterday I refused to print a dozen cabinets from a negative which pleased my patron, but did not me. I may not get another sitting, but I will not let a poor print go out.

FROM G. M. CARLISLE, RHODE ISLAND.

1. Business at my establishment has improved, during the past year, twenty per cent.

2. The outlook for the coming season is better than it has been since 1873.

For the past five or six years, many people of both sexes have been out of employment, and could not, therefore, have surplus money to spend for luxuries. This has been felt by photographers quite as much as by any class of business men in the country. To-day, however, people are pretty generally employed, and we are already feeling an improvement in business as a result.

Thousands of families throughout the country, with small children growing up, have been very anxious to have them photographed; but with little or no income to spare, after paying for a bare living, photographs were out of the question. But as better times are experienced, manufacturing of all kinds starts up in every locality, and

one of the first luxuries indulged in is photographs. And thus I account for the improvement in my business; and I learn from others who have maintained fair prices and kept the quality of their work up to the proper standard, that the improvement in the photograph business is general.

3. I show proofs, and prefer so to do, but desire a payment, or partial payment, at least, before I allow my proofs to leave the gallery. If they are not satisfactory to the sitters or their friends, I cheerfully make resittings until satisfaction is attained; for, having received a sum of money, I am working on a sure basis, and do so fully believing it to be just, and, in fact, as a matter of policy, would not refuse so to do.

Should I make negatives and proofs, and allow them to go home to be criticised, without the sitter having made a deposit, in many cases I would not again see my patron for weeks, and, perhaps, months, and in some cases, never. Any reasonable system that is once understood by the people will not be objected to. I find very little opposition to my system, which I have practiced for many years, and my plan is this:

After making negatives until I am satisfied with the result, my sitters are directed to the office to give their order, where their name is entered on an order-book, with blank stub, to be filled out, fully explaining the size, style, and number of prints desired, also the P.O. address, when the pictures are to be sent by mail. A coupon receipt for the amount is then filled out, and handed to the sitter. This receipt is for the full amount of bill for the order given. Now, if it happens that the party ordering cannot pay the whole sum, I indorse the amount they can spare on the back of this receipt, and hand it to them, which explains the whole matter when the pictures are called for and this receipt presented.

This answer to question No. 3 also explains question No. 4.

5. Certainly; I leave no effort untried that I think may raise the standard of my productions; and I conclude when a photographer ceases to struggle to improve his work, he is no longer a credit to his profession, and should seek other fields for his labors.

6. I am sorry to say my efforts to please my patrons are not in all cases appreciated; yet the satisfaction it affords me to know that I have done right, and as I would be done by, *together with the five dollars per dozen* I receive for my best cards, encourages me to keep on trying, as I have done the past twenty-two years.

As a people, our citizens are more appreciative than they have been in past years; in a word, they are yearly becoming educated up to a higher standard of demand and appreciation in photography; and many old prints that were thought about right once are to be no longer tolerated in the album.

7. I cannot say that low-priced competition has increased any faster than has the demand for cheap work.

I never saw the time when there was not a class of people who would wear brass jewelry and cheap clothing or boots and shoes; and as the population increases, so must increase this class; and if a photographer's circumstances or taste or want of ability compels him to cater to this class, I do not see any help for it. It certainly is a worthy ambition in any man to arrive at the head of his profession, which was never accomplished by choosing for patrons those who seek the cheapest possible wares. This problem has been solved in every city in America; for, by investigation, it will be found that the photographers who have always charged good, smart prices have credit, reputation, and sometimes a fair share of this world's goods. Of the other class, you can draw your own inference from observation.

8. I invariably make more than one sitting. I make, for cards, three positions on an 8 x 10 plate, and should they neither prove to be satisfactory to my patron, or even to myself, I make three more, and so on until something near perfection is attained. For cabinets, I make two positions on an 8 x 10 plate, and continue as with the cards, when circumstances require, and so on to the end, even up to 18 x 22 size, for which I charge enough to enable me so to do.

9. Vignette style, cards, cabinets, and 13 x 16 are most popular with the people of this city, the panel, promenade, and other

odd sizes not being much used; but my theory is that a photographer will sell just such styles as he exhibits and recommends to his patrons.

10. Pictures with fancy backgrounds and accessories are demanded to some extent. I do not think it a good plan to be without these aids; for they are liable to be needed at any moment. Yet I think ordinary photographers are far more likely to do themselves credit by making mostly vignettes; for, unless fancy backgrounds, or even accessories, are judiciously managed, in the slang of the street gamin, "they give the whole business away."

11. I think the question, "Have the so-called improvements, such as retouching, burnishing, tinting in, etc., been *real* improvements?" has been fully answered in the improved condition of the photographs being produced all over the face of the globe. Who would wish to dispense with either of these improvements—*real improvements*?

12. On photographs I have not reduced prices; but on goods, such as frames, velvet goods, etc, I have been able to make quite a reduction, and always found it policy to sell frames or fittings of any kind at a small advance, to encourage people to use the goods, thereby improving the appearance of my work.

FROM E. E. HENRY, KANSAS.

If by giving your readers some of my experience, in answer to your inquiries, I can benefit or encourage any one, I shall feel repaid.

1. Business is good, and has always been good with me during the fourteen years I have been here; and the prospects are that it will be good as long as I continue to please my patrons, keep up with the times, and give them true value for their money. I think, Mr. Editor, if the photographers who complain that their business is dull, and that the public do not appreciate, etc., would strive to do better work, and to please the public, and give them value for their money, we should hear less of such complaints.

6. It is a great mistake many photographers make when they think the public do not appreciate good work. Now, in my

experience of over a quarter of a century, my patrons not only appreciate good work, and anything new, or any improvement I may make, but are willing to pay a good price for it; and in seven cases out of ten, of two proofs shown, they will choose the best.

3. I make a point of always showing proofs. I make two good negatives; the first one to suit myself in regard to view of the face, lights, etc., and the next one according to any reasonable suggestions my subject may make, and show proofs of each; and, as I said before, seven times in ten the best one will be chosen. If, as is often the case, they cannot tell which they like best, but want half from each, why, so much the better for me; for I can easily make a dozen prints from two negatives, while it is close work for my printer to get off a dozen from one these short December days. Of course, I make a reasonable charge for retouching the extra negative—fifty cents to one dollar, according to size of head. The system of showing proofs I think a good one; but the photographer should make his charges accordingly, and before proofs are shown, always remember to secure part payment. This plan I find satisfactory to both parties; my patrons feel certain of getting something to please them, while I am sure of seeing them again and getting my pay in full.

6 and 7. The photographer who keeps up with the times, brings out something new and original occasionally, is polite and cheerful towards his customers, keeps his rooms tidy, clean, and comfortable, gives good value for what he receives, and keeps his prices up. The public will always appreciate him and his work, and low-priced competition will never injure him much. Of course, advertising through the country, "one dozen pictures for twenty-five cents—'perfect gems,'" or "one dozen first-class photographs and a splendid oil chromo for one dollar," is an injury to all respectable photographers, and a disgrace to our art; but if we let these fellows alone, they will starve themselves out in a few months. Photographers should bear in mind how very easy it is to drop their prices, and how very nearly impossible to raise them again.

9. As the public taste is gradually improving, becoming more educated and exacting, these dollar-a-dozen fellows cannot "hold the fort" long, and no amount of fancy backgrounds, accessories, boats, rocks, stumps, grass, etc.,—though all good in their place,—will hide bad chemistry, slovenly manipulation, or inartistic composition and lighting.

12. Retouching and burnishing, I think, have been real improvements in our art, especially the former, when not carried to such an excess, in the vain endeavor to "flatter," as to give the photograph more the appearance of having been taken from a carved and sandpapered basswood man than from a human being. Surely this is not flattery.

5. Give your subject the benefit of your skill and judgment in choosing the most pleasing view or side of his face; place that face in the most favorable light; give a position that is easy, graceful, and natural to your subject, and a pleasant, natural expression; have your subject, position, expression, light, and accessories all in harmony with each other; improve on this by retouching where you can, but not to spoil the likeness and character. That, Mr. Editor, is my theory, and which I try to carry into daily practice.

11. The sizes I find most popular are the *carte-de-visite* size, cabinets, and panels, at present. The panel style I have been making for about six months. My panels, so far as I know, are original in shape and style of mounting. I send you half a dozen by this mail. They are becoming quite popular with the patrons of my gallery, and are commanding good prices.*

Inclosed find P. O. order for amount of subscription to *Philadelphia Photographer* for 1880.

FROM IRVING SAUNDERS, NEW YORK.

I inclose answers to your questions in November number of the *Philadelphia Photographer* as follows:

1. Business is about the same as for the past three years.

2. I expect all I can do, as I am in the habit of having.

3. I show proof from my negatives when desired.

4. I receive one dollar at the time of sitting, the balance on delivery of the work; or, prepayment when sending work by mail.

5. My trade demands cards mostly, and I have little encouragement for more expensive work.

6. My work is appreciated.

7. Low-priced competition is an advantage, because it gives me the best customers.

8. I seldom show but one proof at a time.

9. The public are more exacting.

10. I make mostly cards; cabinets are increasing, and 8 x 10 size are on the wane.

11. My work is mostly bust work, consequently plain backgrounds.

12. Retouching is *necessary* for a good likeness; burnishing gives greater brilliancy; fancy printing gives variety, and creates demand.

13. I have not reduced prices.

FROM A. W. PHIPPS, PENNSYLVANIA.

1. Good; improving.

2. Work hard for the money.

3. Show proofs, if desired, before retouched.

4. All pictures that are mailed; but most of home custom at their option, when they sit or when they get them.

5. Yes; for ourselves as well as our customers.

6. Yes, with most; some exceptions.

7. It has; but does no damage, we think.

8. Yes; sit until we are satisfied, and then show proofs, and if they are not satisfied, try again; some subjects have two or three days before suited.

9. Yes; also much more exacting.

10. Cards most; next cabinets; next 8 x 10.

11. Yes; and we buy before they are demanded.

12. It is such improvement that makes the photograph salable, when we could not sell as we used to.

13. No, increased; and yet we are not paid well for our work, for the amount of work we put on. These short and cloudy days we work like niggers to make it pay. We have for plain cards, \$3 per dozen; gilt enamel

* These fine pictures were noticed in our January issue.—Ed. P. P.

cards, \$4 per dozen, and cabinets, \$8 per dozen, or make one for \$1; if we did not take less than half a dozen cabinets we would not have one-half what we do; but they will order one or two at a time, and pay seventy-five cents after the first, when if we did not do so, would cut off much of the cabinet custom.

We have many customers that depend upon our judgment entirely, and they generally get the best work and likenesses.

FROM T. H. HIGGINS, WEST VIRGINIA.

1. Business is not good, and has not been for two years, and as yet does not improve much, notwithstanding I have been during the past year making considerable effort to revive it.

2. Cannot tell much as to the prospect for the coming season. The revival of general business may help ours.

3. Our custom is to show proofs, not toned, from untouched negatives. Do not like to have them taken out of the gallery, but cannot avoid it sometimes.

4. As a rule we do not secure pay in advance; we cannot do that with our trade, but it would be better for us if we could, for sitters then would not take away proofs and not return, as is now sometimes the case.

5. I cannot say that I am *much* encouraged to make continual efforts to improve, because the efforts are not appreciated to that extent I think they should be. (This answers No. 6.)

7. Low-priced competition I think has done *great* damage to the business here. It attracts a large circle of patrons who do not know or appreciate good work, and are satisfied with anything because it is cheap.

9. The taste of that portion of the public who are willing to pay good prices is much improved, and it is very exacting.

10. The cabinet is the most popular size; and as to styles, about equally divided between heads and figures.

11. When figures are taken, fancy backgrounds and accessories, judiciously used, give better satisfaction than the plain.

8. I just discovered that I passed over No. 8. To that I would say that we always make two or more sittings, to allow a choice.

I find it gives better satisfaction, and saves resittings.

12. I think retouching and burnishing are improvements, but the former is often abused,—too much done,—and the latter, strictly speaking, is not artistic; yet it pleases the people, and it undoubtedly gives greater depth and transparency to the shadows.

13. I did reduce prices within two years, but one year ago I went back to our old former rates, and have maintained them ever since.

FROM A. COATES, MICHIGAN.

Thinking that you would like to hear from the small fry of the country towns as well as the big bugs of the city, I will venture to write in answer to your circular letter in November number of the *Philadelphia Photographer*, and answer some, if not all, of the questions. I am located in a small town on the eastern shore of Lake Michigan, where I have been nearly three years. And now I will try and answer your questions in order.

1. Business is fair with me, and improving; but it may be because I am giving better satisfaction than I was.

2. Prospects are encouraging.

3. I only show proofs occasionally, when convenient, and my system is, satisfaction warranted. I think the advantages more than counterbalance the disadvantages.

4. I do not take pay in advance unless I send by mail.

5. I am making all the efforts I can to improve.

6. Well, to some extent, but not as much as I would like.

7. I do not know whether it has increased much or not; but there is too much of it, and it degrades the profession, and is an obstacle in the way of advance.

8. I never make more than one sitting, when I get a negative to suit myself, and generally print from the one that suits me best.

9. I do not know how much the public taste has improved; but it is not more exacting than the good of the profession requires.

10. Card, cabinet, and 4-4.

11. They are preferred, but not much demanded. I think that most of the accessories and fancy fixings are an abomination.

12. I certainly do, though retouching is often carried to excess.

13. I have reduced prices twice; first to induce people to invest more in photographs and less in cheap tintypes; and again in consequence of opposition under-running me on prices.

I do not know if I can add anything more of interest. I have taken the *Philadelphia Photographer* for nearly two years, and shall take it right along.

OIL AND CHEMICALS.

MR. W. H. STORY, one of our old subscribers at Pontiac, Ills., sends us an item from the *Chicago Times* of December 8th, which is too full of real sentiment not to appear in our pages, and to which we beg to add a few words of response. First, let us hear what Mr. Story has to say about it.

"I clip from a Chicago paper and send inclosed item, in which the unfortunate and insolently aspiring 'Photograph Manufactory' is belabored.

"'Chemicals and Oil!' How needful to associate them together, for the erosions that will always be produced on the delicate skin of the 'genuine and only renowned' artist, by the 'chemicals' of the aforesaid 'photograph manufactory,' need the emollient 'oil' continually. In fact, 'chemicals and oil' seem so intimately connected that, like uncongenial children in the same family, they constantly elbow each other, and tread on each other's toes.

"If the Academy had not so industriously *wired out* the 'photograph manufactory,' the 'business' ways of the proprietor would probably not have been used to defeat her. Like their illustrious guest, he 'fought it out on this line.'"

Here is what the *Times* sayeth:

CHEMICALS AND OIL.

"Photographers frequently belittle themselves in public estimation by claiming to be artists, when they know, and the public knows, that, properly speaking, they are not.

Indeed, the desperate efforts sometimes made by them to secure recognition in art circles, is a tacit acknowledgment on their part that they do not belong there; because, were such recognition theirs by right, there would be no opposition to their pretensions. As well might a pressman on a great newspaper like the *Times* claim to belong to the editorial force, as a photographer to be an artist. And there is no disparagement of the pressman or the photographer in this comparison. A good pressman is of more importance than a tolerable editor, just as a good photographer is far in advance of a maudlin artist. There are, however, higher planes in newspaper and art work than either a pressman or a photographer can hope to reach—so long as he remains a pressman or a photographer—and the one cannot become an editor, or the other an artist, by achieving the greatest success in his particular line, although he wins both fortune and fame.

"Many leading photographic establishments have regular art departments, where good work is done in crayon, water-colors, and even in oil, but not by photographers, or by photographic appliances. True artists are employed therein, and the fact that their work generally goes before the public, bearing the label of their employers instead of their own, does not indicate that photography is entitled to any credit for it. As a matter of business the manager of the camera finds it advisable to group the two together, and for the sake of the money there is in it the artist consents for a time to sacrifice his individuality. The proprietor of the establishment thus comes, in time, to be recognized as an artist, when in reality he could not make a sketch of a sorrel dog that might not be mistaken for a horse or a cockroach. It is this gradually acquired reputation for artistic ability that aggravates the average artist, and arrays him against the photographer, who, in his estimation, is reaping the rewards of a virtue that he does not possess. But just so long as indigent artists are compelled to sell their genius and skill, so long will others be quick to utilize their necessities to their own profit. It is so in all branches of business—it is emphatically so in art.

THE ACADEMY RECEPTION.

"The Chicago Academy of Design gave a reception from 4 to 10 o'clock on Friday evening, to which Gen. and Mrs. Grant were invited. Shortly before 6 o'clock, Gen. Grant, in charge of the President and members of the Committee, entered the gallery and went through the introductory and hand-shaking ceremony in his usual undemonstrative manner. After this he inspected in a cursory way the paintings that adorned the walls, mostly by local artists, made some complimentary remarks pertaining thereto, and was about to leave to fulfill another engagement when he received a pressing invitation to inspect a photograph establishment located in the same building. He submitted with as good grace as possible, and was repaid for the extra assessment upon his endurance by being allowed to kiss two of his lady admirers. Members of the Academy, begrudging every minute that their distinguished guests could possibly spare, were considerably exercised over what they considered as an infringement upon their rights. They claimed that, in accordance with the terms of their contract, their gallery was not to be in any way identified with the photograph manufactory adjacent; that they had locked and wired up the connecting doors to guard against the possibility of any appearance of an intention to use the guest of the evening for advertising purposes, and that all their precautions had been rendered of no avail by the 'business' ways of the enterprising proprietor. On Saturday, a canvass of the sentiment of the members showed that they were not as yet agreed upon a definite course for the future. On one point they were united, and that is that their gallery and the photograph establishment must hereafter be as separate and distinct as they would be were they miles apart; but they differed as to whether this point could be gained so long as they were in the same building. Some of the more positive were in favor of drawing a 'dead line,' while others insisted that only immediate removal would prevent the disruption of the organization. With one accord they declared that the Academy cannot rest under the imputation of being a side show, and live."

And what shall we say to the above effusion? We see you all smile with irrepressible amusement as in the closing paragraph you find the keynote of the writer's animosity towards photography in general and one neighboring photographer in particular. And this keynote is the *success* of the despised photographer.

Our friend begins with the assertion that "photographers frequently belittle themselves in public estimation" by their "false claims." Here the writer shows a singular obtuseness to the fact that so-called "artists" also are given to this same "*belittling*" of *themselves* by their constant outcries against photography. They show a disposition much like that of the dog who bites the hand that feeds him. We feel quite safe in drawing this simile, for the same clamorous opponents of our beautiful art are the second and third-class painters who depend upon the contemptible "*photograph manufacturer*" for the foundation of their best efforts. Who ever heard of one of our truly great artists flinging contempt upon photography? No one. And why? Because, safe in their own great powers, and from their high standpoint of well-earned fame, they have nothing to fear from their sister art, photography. On the other hand, the poor shams of artists are finding daily that public taste turns naturally to a fine photograph in preference to an inferior painting. Again our friend touches pathetically upon the "*indigent artists*" who are compelled to sell their genius and skill in favor of the well-to-do and successful photographer. Why is this? Because those same "*indigent artists*" are incapable of producing anything else that is *salable*. They have some idea of artistic productions; perhaps good taste in color; and therefore become valuable *assistants* in photography, but nothing more. Set any of these men to paint a portrait from life, or to place on canvas a fair landscape, and they are as helpless as a lame man deprived of his crutch. They can cover over a photograph, but they cannot *draw* half so truly. They *must* have a photograph as their guide and groundwork, or their productions fall far short of even the *cheap chromo*.

This foolish, jealous animosity on the part

of painters towards photography is of long standing, and though it is continually cropping up under some new name, still the true keynote, as we said before, is the *success* of the *photographer*, who is always the employer, while the "artist" is the employee.

Why is this? Had the particular photographer mentioned in the article above *failed* in inducing Gen. Grant to visit his establishment, he would probably never have received the honor of a mention in connection with the Academy of Design, and would have dishonored his reputation for enterprise.

As it is, however, the notice he *did* receive from the pen of the artistic writer has undoubtedly proved a most excellent advertisement for the business which he makes it his aim to always push to the front. Now, to give our friend a bit of instruction (and we do it humbly, and will try to do it artfully) on what constitutes an artist. Surely not the ability alone to handle a brush dextrously, and to apply a skilfully blended tint! If such *were* the case, then would we at once withdraw in favor of the kalsominer and fresco painter. But such is *not* the case. That man is an artist whose keen eye at once discerns the fitness of things, discarding incongruities, and arranging all in true harmony: whose knowledge of the power of light and shade enables him to produce the softest and clearest effects; whose taste in composition draws out the best points, and covers over defects. Such talents prove the true artist, whether his medium of producing a picture be *oil* or *chemicals*.

And when it becomes necessary for the disciple of the dark-room and the brandisher of the brush to join hands in catering to the wants of the picture-desiring public (*bless 'em*), why is it, we say again, that the "manager of the camera" is "on top" always, while his work is underneath? It is because photographs have a prestige with the public which paint cannot obliterate, though it may help flatter and delude. How often have you seen—our brother of the *Times*—an "artist" have the push to "open a studio, and announce that he has first-class photographers in his employ, with whose co-operation he is ready and able to produce

first-class portraits? Once we knew of such a case, but only once.

If there is any just cause of complaint in this matter at all, the photographer has it, for "Lo! a cry from the wilderness." The *Cooper Institute* at New York annually "graduates" a corps of "artists" who are turned out as by a crank—shoved off like eaglets into the air—whose first reach for support is towards photography. They catch at it as the only plank floating between them and starvation. A few solar prints are treated, a couple framed, and hung over the shoulders of some poor, superannuated creature (with "*fine life-size heads, this style, for \$5*" underneath), who, with them, paces up and down the streets, and the business (of ruining photography) is begun. Failing in New York, this corps of "artists" diffuses, and Peter Cooper only knows what we are all coming to, unless "oil and chemicals" cry quits, and each push their own business with as commendable enterprise and vim as did the unknown (to us) and praiseworthy Chicago photographer aforementioned.

ENCOURAGE AND DISCOURAGE.

BY E. F. MOELKE.

I HAVE been in the photograph business about twelve years, and never had any occasion to write on any subject until now. I want to say a few words to employees and employers on the subject which heads this.

1. You find in every issue of the valuable *Philadelphia Photographer*, published gratis, the notice, "Wanted an operator, or printer and toner." Now, the necessary corresponding costs money, and railroads charge fare; and all expenses added make "wanting," in every instance, rather expensive.

2. I will give my own experience, as follows:

A party advertised for a man that could do first-class work. The man came from Chicago, about 1500 miles; and as the employee came in contact with his employer, *he became disgusted*. Why? Because he had not the place of business represented; and our disgusted operator returned to his old place, a wiser and more careful man.

Again, a party will ask for samples, and they being sent and examined, the employer has the operator come to him; and instead of finding a reliable man, he has a botch, whom he has to teach the business. The employer becomes disgusted also with the pretended operator or printer or retoucher.

3. I recommend that the editor have a bureau, by means of which an employer may send for an operator and printer and toner whom he can feel satisfied will suit; have a reference from their last employer, and work with it to show what is done, and can be done, with good taste, and taste that will please. This would make it pleasant and easy for both parties.

I hope this will meet the eyes of parties who will consider the responsibility that they take upon themselves when they cause a man to give up a good situation, and go to an unworthy party.*



Queries.

1. WHAT is the best way to reduce the intensity of old and dense negatives, without destroying detail?

* Our correspondent touches upon a subject that is worthy of generous consideration. Humanity is prone to err and deceive, but most men are apt to act fairly; and we believe photographers are as fair as any other body of men. Yet we know that oftentimes engagements between employer and employee are made thoughtlessly and without due consideration, in which case disgust and disappointment are sure to follow. Loss on both sides follows, and general distrust. Fairness and honesty of purpose only will cure it. As to the bureau our correspondent suggests, we fear no one man would be willing to undertake such a responsibility, unless we have our annual exhibitions and conventions again, so that he could speak from actual acquaintance with the parties and their work.—ED. P. P.

2. What is the best way of cleaning old developing bottles, and spatters from developer either on wood, glass, or clothing?

J. G. V.

A FEW NUTS FOR SPHYNX.

1. When the first cold snap came on us, about six weeks ago, I made up a printing bath according to Mr. O'Neil's formula, with muriatic acid, only I made my solution forty-five instead of thirty-five grains to the ounce. On this bath I undertook to float Extra Brilliant Dresden Paper, the temperature of the silvering-room being between 60° and 70° Fahr., and the paper thoroughly damp. In less than a minute after removing it from the bath, where it had remained three minutes, the surface of the paper was a perfect labyrinth of rills and rivulets; and not until I had reduced the solution to thirty-five grains per ounce, and added a few drops of nitric acid, did it begin to take nicely to the paper. *What is the matter?*

2. Mr. Bridle, in the July number of the *Philadelphia Photographer*, says the bath should have liquid ammonia added to it "until it just, and only just, turns pink litmus-paper blue." Now it may do this immediately upon immersion, or else in from ten to sixty seconds. Which of these tests indicates the most favorable condition of the bath, and why is an alkaline bath preferable to one which is a little acid?

3. What is the proper strength of bath in cold weather for the Dresden paper, and for printing medium negatives? Also the time of floating under conditions mentioned above?

4. Lastly, a good formula for purple-black tones?

A reply to these queries will greatly oblige a
YOUNG PRINTER.

Will some of the friends of *Sphynx*, and of a suffering fellow craft, please give their ideas upon these topics? We want answers from our readers.

IN our next issue, we hope to present a picture from negatives by Mr. F. Gutekunst, Philadelphia, of Miss A. Detchon, the talented musician and elocutionist.

AN ESSAY ON THE EDUCATION OF THE EYE

WITH REFERENCE TO PAINTING.

BY JOHN BURNET, F.R.S.

(Continued from page 46.)

ÆRIAL PERSPECTIVE.

LINEAL perspective being that part of drawing which is produced by the means of lines only, ærial perspective is made use of to designate those changes which take place in the appearance of objects, either as to their receding or advancing, from the interposition of the atmosphere; therefore to the application of this quality the artist is mainly indebted for the power of giving his work the space and retiring character of nature: but though the eye is at all times pleased and gratified with the power of viewing distant prospects, yet objects require a certain definition to lead the imagination, without perplexing and troubling the mind. Neither are we pleased by sudden jumps from the foreground to the extreme distance. The eye is more delighted, therefore, in being carried over a gradual diminution of many intervening objects, or in searching for outlets through screens of intervening trees or clumps of buildings; such perforations assisting by their framework the distant tone of color with which the most remote objects are nevertheless sufficiently embodied out. Now, though the interposition of the atmosphere gives us the means of producing the effect of distance in a picture, yet the mind requires a certain variety to hold it in amusement, and a certain appearance of substance to give a reality to the scene; on the other hand, when the atmosphere is deprived of the means of refraction, by reason of its clearness, a false representation is produced, and objects appear nearer than they are in point of truth (as may be perceived in many scenes in Switzerland), and the eye is deprived of the gratification of viewing the outlines of objects through a variety of strengths. When we reflect that the art of painting is an attempt to deceive the eye, in representing upon a perpendicular surface the variety of planes upon which the several objects in nature are placed; when we reflect that the painter is deprived of many col-

lateral means of assisting the deception, it requires his whole knowledge to be employed in working out the result, lines possessing distinctness of form, bulk, and minutia, light and dark, to give them their full force upon the eye, colors unassociated with atmospheric influence, with the reverses of all these assisting by contrast. We must admit that a knowledge of ærial perspective embraces in its effects nearly the whole art of portraying the retiring and advancing of objects. In the works of Albert Cuyp and Claude Lorraine we have many examples of this quality in perfection, where the interposition of the air, whether of a yellow or blue color, imbues every object with its just proportion, according to its relative distance from the foreground, and the near objects are strengthened by black and red, or other colors less in unison with the general tone of the picture; also in the foreground of many of the works of Cuyp and others, the student may perceive the shadows under the leaves and stones in the foreground broad, black, and of large decided forms. Now, though this is the general characteristic of this department, we see in many works of the best artists objects very much diminished in size, according to their true perspective distance, yet possessing a force of color little removed from the tints of the objects in the foreground, neither does such harshness prevent them keeping their situations; this arises from the very small space they occupy upon the retina, forming so diminished a picture in the eye, even when painted of the size of nature. In historical compositions, the most distant objects form often a portion of the story; they are, therefore, to be pronounced with that strength which will enable them to assist the painter in producing the desired effect on the mind of the spectator, nor does truth appear at all violated, provided they are not made out with too great precision: in history, and the higher walks of the art, where the greatest liberties are allowed, it may be less necessary to notice the conduct of the best artists in this particular, but we often find it even in landscapes and common representations of natural effects: how often have we observed wood scenes and others prevented from being heavy by the introduction of a few dark touches, and breadth

of color and space produced by the small dark of a figure. When, however, the effect of hazy sunshine (such as we see in the works of Cuyp) is to be represented, the most distant objects ought to be rendered with the greatest delicacy; for the whole atmosphere being then filled with the refraction of light, the middle ground objects appear to be made out with a uniform tone of half-tint. Aerial perspective, therefore, though understood to be subject to rules, is more completely under the control of the painter than lineal perspective.

I have noticed elsewhere how much in reality objects in motion attract the eye of the spectator, with what intelligence the peculiar walk of those we know is communicated even at great distances: this is one reason out of many why we are allowed to pronounce parts of a picture with more

ish according as they are drawn true to lineal perspective, but it is to this quality of light and shade that they are indebted for their effect upon the eye. Also, two angles may occupy the same space on the retina, but by this power one is made to approach and the other to recede, so that one is diminished to the size of a tent, the other increased to a pyramid.

FIG. 22.

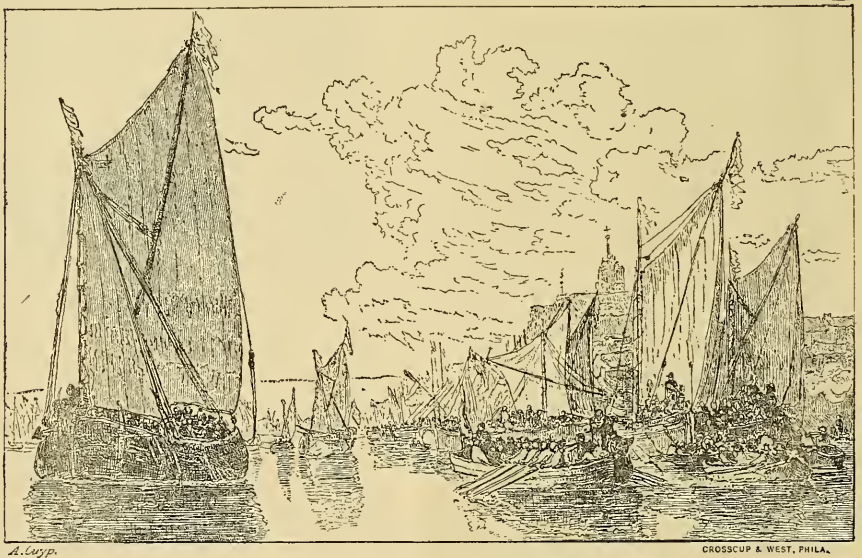


FIG. 23.



In Fig. 24, the canal of Dort, by Cuyp, in the Bridgewater collection, we not only

FIG. 24.



strength than other parts; as the mind of the spectator must be arrested with the same force it feels itself acted upon under natural effects.

The application of aerial perspective, therefore, enables the artist to keep the several objects in their respective situations, and give a natural reality to the most complicated scene. A row of columns will dimin-

ish and an excellent example of aerial perspective, but also of that assemblage of lines produced by the repetition of forms, which assists the receding of objects from their diminution, the doubling of the lines in producing richness of effect, and that harmony which arises from one line counteracting another in its direction, giving thereby a general balance to the whole. The effect

of aerial perspective upon the eye being mainly attributable to the application of shadow to the several outlines, thereby giving them their approaching or receding character, such arrangement is to be chosen which will give them this quality, and which is to be afterwards repeated in smaller portions through the piece. In accidental combinations in nature, we often perceive this arrangement, as in Fig. 25, which ought to

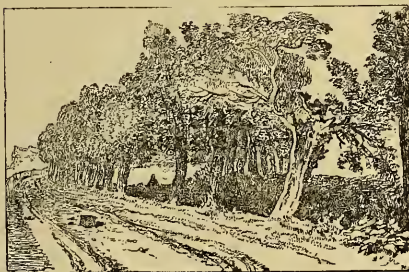
FIG. 25.



CROSSCUP & WEST, PHILA.

be sketched and reflected upon as one of the great means we have of enabling us to cope with her under the disadvantage of working upon a flat surface. We also find aerial per-

FIG. 26.



CROSSCUP & WEST, PHILA.

spective indebted in its effect to the collection of many parts, whose shadows form a

mass of half-tint, their distance bringing them in apparent contact, owing to their diminutions; while their softness gives them apparent distance, owing to their want of minute parts, as in Fig. 26.

To go through on every occasion with a variety of examples, would, I feel persuaded, only perplex the student; if he comprehends any rule, it is easy to extend it; to those who understand slowly, reflection on one or two diagrams will be of more service than educating the eye without impressing the mind. The real trouble in life, in all professions, is the trouble of thinking; to escape which the most laborious trifling is caught at, but if fairly grappled with at the outset, everything becomes clear, and, in after life, that which is a continual annoyance to many becomes one of the greatest gratifications. Why is it, that to the eye of an artist the drawing of a complicated plan is rendered clear at a glance, while to others it requires a multitude of figures of reference, and a long explanation? It is, that his mind has been educated in continual intercourse with the eye, and the constant habit of reflecting on cause and effect, has rendered a numerous assemblage of lines intelligible to him, which to others, uneducated, appear like a species of hieroglyphic.

CHIARO-OSCURO.

Chiaro-oscuro, or light and shade, when applied to the management of a picture, takes a range too wide to be explained without the assistance of a multitude of examples, and even then it would be very imperfect; so endless and multifarious are the changes it assumes, being entirely at the caprice of the painter. Paul Veronese, when questioned about the propriety of accounting for a shadow, answered, "a cloud is passing;" and Reynolds says, "the proprieties of a painter are superior to all other considerations," and "he whose aim is to touch the passions, must not be too fastidious in pandering to an uneducated eye. The effect is to be produced at any sacrifice; but the painter who accomplishes his purpose with the least violation of truth shows the greatest command of his materials." This it is which places the works of the great painters beyond the comprehension of the ignorant;

they only can judge of external matters, and are pleased when the eye alone is gratified; whereas the aim is the homage of the educated mind. "Leonardo da Vinci," Reynolds remarks, "recommends the light side of a group to be brought off a dark ground, and the dark side opposed to a light ground; this, no doubt, was the practice when the arts were in their infancy, but had he lived to see what has been produced by the contrary method, he would have altered his opinion." If relief or distinctness is the aim of the artist, it is certainly the best; but if breadth of effect, he will best accomplish it by combining light with light, and losing the darks of the group in a still darker background.

Light and shade, therefore, independent of its effects in rendering objects more distinct and intelligible, has other properties, and those of a higher quality, when painting has to take a station in the ranks along with music and poetry, these properties are the means of giving breadth and grandeur of form, the effects of bustle or repose, and that peculiar emphasis which particular portions of a composition require. Now in many situations, where such qualities are requisite, nature offers often little more than a suggestion, and upon such hint the artist is obliged to lay the foundation of his whole scheme, and work it out according to the command he has of his materials, or the quantity he is in possession of. Some compositions being entirely addressed to the mind, while others are confined to a mere gratification of the eye, a greater or less liberty is allowed to be taken with the arrangement of the light and shade, according to the nature of the work in hand. Light and shade, or the conduct of the *chiaro-oscuro* of any work, is therefore entirely given up to the control of the artist, to be used for the express purpose of rendering his design complete; where he departs too much from the arrangements observable in nature, it becomes capricious, and loses its effect upon the eye of the spectator; when, on the other hand, the everyday occurrences are adopted, his work becomes common and feeble. Reynolds says justly, "when we are required to paint broad, it is not understood that we should paint broader than nature; but objects are to be

so placed, that there is scarcely any limit to their breadth of light and shade. In the earlier stages of painting, relief and distinctness were the only requisites sought after. If a round object could be represented upon a flat surface, or any substance so expressed as to induce the spectator to put forth his hand to touch it, as a test of the deception, the height of the artist's ambition was attained; but as the art advanced, it was found that painting could achieve more honorable results, the mind was to be acted upon, without stopping to gratify the eye at the threshold of entrance. Coreggio seems to have been one of the first who employed *chiaro-oscuro* in its greatest extent, to give to his compositions that dreamy character which removes them from the "ignorant present," and which is the result of breadth, and melting of the outline in the tint which surrounds it. If we examine, for example, a room filled with several objects, in open day, the distinctness with which they all present themselves to the eye not only perplexes it in finding a resting place, from each claiming attention, but the quickness with which we are carried from one object to another (from a single glance being sufficient to satisfy our curiosity) destroys that pleasure the mind receives from contemplation; whereas the same scene viewed in the evening, by the light of a fire or candle, exhibits effects more pleasing to the eye and gratifying to the mind, which are entirely owing to the breadth of light and shade; fewer objects present themselves to the eye, and these few acquiring novelty in their forms, from the shadows floating about; others, entirely buried in obscurity, amuse the imagination in tracing them into form: while the large blank spaces present vacuums for the eye to rest and repose upon. Independent of these results, we also know that objects acquire grandeur from their breadth and simplicity of parts, the shadows being more of one strength, and the lights more of one color; two concomitants of greatness.

In entering upon this branch of the art, it will, however, be necessary to confine our remarks, in the first instance, to the effects of light and shade upon the forms of objects, in altering their appearance to the eye

of the spectator, without reference to their acting upon the imagination.

All outlines, without the application of this quality, are deficient in giving a true representation to the eye; for example, two circular outlines without shadow have no distinct meaning, but by the application of this property they either become convex or concave bodies.

FIG. 27.



FIG. 28.



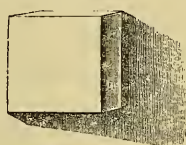
We also find that objects either project or recede, according to the strength of their shadows, and become either solids or vacuum, from their shadows falling within or without the spaces marked by their outlines.

FIG. 29.



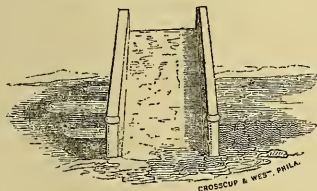
CROSSCUP & WEST, PHILA.

FIG. 30.



We also find that it often indicates the peculiar character of objects, when the out-

FIG. 31.

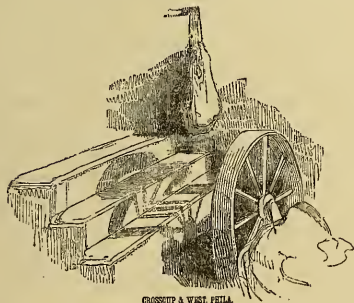


CROSSCUP & WEST, PHILA.

line is hid in consequence of the situation of the spectator, as in Fig. 31.

In drawings of machinery this is often of

FIG. 32.



CROSSCUP & WEST, PHILA.

the utmost importance, as information is the only point aimed at. We likewise often find shadow made use of for enriching of the

subject, by making the shadows of complicated objects fall upon a background of an uneven surface, as in Fig. 32.

Any work treating of the education of the eye, however short, must necessarily touch upon points spreading over a large range of study, and of course occupying a long space of time to become master of. It will, therefore, be difficult to separate those parts which require a power in the mind, from that portion which depends more upon the cultivation of the eye, accompanied with very little effort of thinking. Nothing but early practice can enable the eye to see, and the hand to put on paper, the various objects necessary to painting with readiness and fidelity; as has been remarked by Reynolds, who says, "a degree of mechanical practice must precede theory; the reason is, that if we wait till we are able to comprehend the theory of the art, too much of life will be passed to permit us to acquire facility and power; something, therefore, must be done on trust, by mere imitation of given patterns, before the theory of the art can be felt;" yet, nevertheless, the attention should be gradually awakened to observation, otherwise the power of the mind will lie too long dormant to be easily called into action when judgment is acquired, for, as he further observes, "an artist ought to see clearly enough to enable him to point out to others the principle upon which he works, otherwise he will be confined, and, what is worse, he will be uncertain." In the portion of this essay, therefore, which is passed over, I have endeavored to confine myself merely to that extent of knowledge which every one ought to possess to enable him in after life to enjoy the beauties of nature and art, and give him the power of communicating his ideas usefully to others. I shall now endeavor to trace through the higher departments of art those principles of design upon which painting depends for its operation on the mind, and which places it in the same rank with poetry and music.

(To be continued.)

MR. FITZGIBBON parts with the N. P. A. without a tear. We "wept at his tranquillity," and are promised full particulars for our next issue.

GERMAN CORRESPONDENCE.

*Alleged Bad Qualities of Nitrate of Silver—
Novelties in the Woodburytype Process—
New Experiences in Gelatin-plate Work-
ing—Edwards's Intensifiers and Eder's
Developer—New Prize Questions—New
Actinometers.*

OF late, I have heard many complaints about the poor quality of the nitrate of silver which is obtained in the market here. All kinds of defects are imputed to it. One complains that his bath works indifferently only, and that the plates cannot be intensified, while the other, on the contrary, obtained hard, coarse lights, with totally underexposed shades. The most remarkable and startling proposals are made to remedy these defects. One proposed to let the silver bath evaporate with radical vinegar, and to melt it afterwards; a very expensive and unscientific way to obtain the desired result. Another gave his silver bath to a druggist for analysis, and was informed that traces of clay had been discovered in it.

In the face of these manifold complaints, it is remarkable that neither I nor my pupils have ever had occasion to find fault with our silver baths; and I therefore publicly requested the photographers who had complained about their nitrate of silver to send me a sample of the objectionable matter. I obtained, in consequence, several samples, without, however, being able to detect anything wrong in them. There was neither clay nor any other disturbing matter contained in either of the samples, and they made quite an excellent bath, which worked to perfection, thus proving that the silver was innocent of all the defects imputed to it, as mentioned above; and it can, in fact, truly be stated that nowadays the silver obtained in the market is of an unexceptionable purity, as rarely met with in other substances.

What is the cause, now, which underlies the many complaints of the photographer? Maybe it would be well to look for it in the distilled water, which is often polluted with organic substances; the most insignificant quantity of unvolatile organic matter being often sufficient to produce the most annoy-

ing disturbances in the silver bath. I have mentioned, on a former occasion, that this disturbing matter can be easily removed with permanganate of potash.

It is to be hoped that one of these days the Woodbury relief process will appear here in its newest shape. Mr. Woodbury has greatly simplified his method, and does not need any more the hydraulic press, which required so much expense and power. The gelatin relief, which he obtains in the well-known manner, is copied with a thin tin-foil, which renders the most minute lines very correctly—just as clear and sharp as the hydraulic press with a lead-plate. The relief obtained in this manner can, if I understood right, be fixed with gypsum, and then used for printing, or moulded in gypsum, and cast in shaft-metal. The cast is then the printing-plate.

In this simple form, the process could be operated in every studio; and, in fact, Mr. Woodbury proposes to offer his process to all the brethren of the craft for an adequate remuneration.

Gelatin, and no end of it; gelatin everywhere. It is not possible nowadays to come in contact with any photographic circle without hearing gelatin plates discussed on every side. The extremely miserable weather we had towards the end of last year, when it used to be so dark, that one day I actually could not copy even a carbon print, caused the photographers to have recourse, in spite of their reluctance, to gelatin plates.

Many new experiences were gathered in the course of the last few weeks, and the success of the new process seems to be assured, without any doubt. I am far from predicting that the collodion process will be abolished altogether, for such a revolution does not take place in a day, and in fair weather the photographer will prefer his wet-collodion plates to any other preparation; but it is certainly a great progress and advantage—even in America, where a bright sky is the rule—to be able to work now on dark days, when formerly the photographers were forced to send their customers away.

The gelatin plates appear to be of even more advantage in landscaping, in which branch plates of the highest sensitiveness are

not necessary, a plate of the sensitiveness of the common wet plates being in most cases sufficient. But this is exactly the advantage which the gelatin process offers in allowing the production of plates of almost any desirable degree of sensitiveness. This sensitiveness used to be raised to twenty times that of the wet plates, but it seems that, of late, this exaggerated high sensitiveness has been abandoned.

The plates sent on here recently, by Wratten & Wainwright, are far less sensitive than they used to be. I found the other day, on comparing them with wet plates, that they are about six times more sensitive than the former; but they now make a much more sensitive picture than the former highly sensitive plates used to produce, which makes it more agreeable for the photographer, as he is now not forced any more to develop such plates in Egyptian darkness, and, furthermore, it is not necessary to intensify any more at all.

I have continued my experiments with Edwards's intensifier, which I mentioned in my last letter. At first, I thought that in using the same, red sulphuret of mercury was developed; but I found that such is not the case. The iodine-hydrargyrum contained in the intensifier works just the same as if no hypo was there at all. Subiodide of mercury is formed.

I developed one-half of a plate with a solution of iodine-mercury in iodine-potassium, the other half with Edwards's intensifier with a solution of iodine-potassium in hyposulphite of soda. Both halves assumed a green-black color, the first much faster and more intensive than the latter half.

If both are treated with a concentrated solution of hypo, they weaken to an equal degree, as if they have not been intensified at all, which goes to prove that in such intensified plates no sulphur-silver or sulphur-mercury is contained, for both are not decomposed by hypo.

The oxalate developer of Eder I recommended in my last letter for dry plates has proved a thorough success here. Almost all the dry-plate establishments here work with the same. For gelatin plates there is absolutely nothing better.

The developer has been already placed in

the market. Of course it is affected gradually by the oxygen in the air, and thereby loses its effectiveness. I prefer to keep the two following separate solutions always ready, mixing them as I need them.

A—Neutral Oxalate of Potassium, . 260 grms.
Water, 1000 “

B—Sulphate of Iron, 300 “
Water, 900 “
Sulphuric Acid, some drops.

For use I mix one volume of B with three volumes of A.

For collodion emulsion I add yet 10 drops of solution of bromide of potassium to 100 c.c. of developer. For gelatin emulsion this is not usually necessary.

The negative is developed with this developer even more brilliantly than with pyrogallie acid, and it offers furthermore the advantage that several plates can be developed in succession with the same liquid, and that the orange color of the plates guards them against the deteriorating influence of the lamplight.

Those who work the first time with gelatin plates, and do not use at once the right receipt, will find that they will have to contend against innumerable difficulties. Most of the receipts appear to me to have too much gelatin and too little silver, in consequence of which their diaphonous layers are formed, which yield weak negatives only.

I now use the following receipt: 1 gramme white German gelatin; 1 gramme bromide of ammonium (dry) dissolved in 20 grammes of water (distilled); 1.7 grammes sulphur-silver (cryst.) dissolved in 10 grammes of water (distilled); 1.5 grammes ammonia, specific weight 0.963.

The solution of silver is added, drop by drop, to the bromide of ammonium solution, and then the whole is kept in a liquid state at a temperature of 90° F. during twenty-four hours. After this the preparation is allowed to congeal again, and then washed with cold water, which is done very slowly, and mostly very superficially only. It is therefore necessary to divide the congealed mass into small pieces, which are then placed in a bag, and suspended in flowing water.

Often it happens that no running water is

at disposal, and then it is well to wash with alcohol, which is poured on the congealed gelatin, and changed three times, in doing which each portion of the alcohol is left to rest half an hour.

After the third portion of the alcohol has run off, the above-mentioned mixture retains about 9 grammes of alcohol, and then if 26 grammes of water are added to it, and the whole warmed, a gelatin is obtained which, owing to the alcohol contained in it, dries very quickly, in about twelve hours, and which also keeps longer than common emulsion.

Recently the Photographic Society of Frankfort-on-the-Main has offered a prize for the best six genre pictures and portraits of cabinet size. The prize is modest enough, seventy reichsmark, equal to \$16.80; but it is a question whether it is to any purpose nowadays to offer a prize for superior portraits and fancy pictures in cabinet size, as we have surely plenty of both. It appears to me that it would be much more judicious to offer a prize for such pictures as have not yet been sufficiently perfected.

This matter was recently discussed at a meeting of the Society of Berlin. One member proposed that an individual possessing the least prepossessing exterior possible, should make the round among the different photographers aspiring after the prize, and that to the best picture of this person should be accorded the prize. I had another proposal, namely, the taking of a fancy picture, representing a lady and gentleman, which should stand the critic from a purely artistic standpoint. Until now it was customary in such fancy pictures to let the lady stand and the gentleman sit, which is certainly at variance with our notions of good manners. Also, in other respects, I have seldom found a happy solution of this problem, and I believe that if a prize would be offered for a purpose like the above named, many new ideas would be ventilated to the benefit of the fraternity at large.

Of late the demand for a good photometer or actinometer has increased again, and I believe that it is of more importance now than formerly, owing to the high sensitiveness of the gelatin plates, the time of exposure of which has to be very painfully measured, for

a few seconds may produce over-exposure. Of main importance for such a purpose is the finding of some substance with a sensitiveness sufficiently high to indicate in a few seconds the strength of light. Monckhoven's uran-photometer is by far not sensitive enough for this purpose.

Professor Zoellner, at Leipsic, used the other day Crookes' radiometer for that purpose. He suspends the wings of that well-known instrument on cocoon threads, so that they do not incessantly turn around themselves, but are only to a certain extent deflected from their centre of gravity, and this the more the greater the strength of the light is. It is therefore possible to read off so to speak the strength of light from such an instrument, just like on a thermometer.

The only drawback with this instrument is the fact that it is affected by all the rays, even from the yellow and red ones, which have, photographically speaking, no effect whatever, and it may happen that in the daylight there are many yellow and red rays, but only a few actinic rays contained, in spite of which fact the instrument will indicate a high degree of strength.

For photographic purposes we therefore need an instrument which is mainly affected by blue and violet rays. It may be that Zoellner's instrument can be made with blue glass, in which case it would be of much more service for photographic purposes.

Recently, Mr. Warnerke, of London, to whom we are indebted for many interesting experiments already, constructed an actinometer on quite new principles, which are based on the phosphorescent effects of the actinic rays.

He exposes sulphide of calcium three seconds to the light, whereby it becomes phosphorescent, and he now determines the intensity of light of that phosphorescent body with the aid of a well-known contrivance—a revolving disk, in which leaflets of unequal transparency are inserted. This disk is made to revolve between the eye and the phosphorescent substance until the leaflet of membrane is reached, through which no light can penetrate any more to the eye. The relative thickness of this leaflet of membrane determines the strength of the light.

The last mentioned diaphragm contri-

vance to determine the strength of light has been repeatedly made use of already, as, for example, in my photometer. The question is whether the same result may not be obtained without using a phosphorescent substance, as, for example, by letting the daylight fall through a blue glass, and inserting between the above-mentioned scale till the eye does not experience any more a perceptible effect of the light.

Very truly yours, DR. H. VOGEL.

BERLIN, January 30th, 1880.

WHAT PHOTOGRAPHERS SAY.

A CORRESPONDENT said, a few days ago, "Do give us all the 'voices' you can; it cheers and helps one to hear what the craft have to say. *Fill your journal with it.*" Here goes, then, for some more of the good things.

AN EXCHANGE COLUMN WANTED.

COULDN'T you devote a department for the purpose of supplying a means for photographers to communicate with each other when they have apparatus, etc., for sale or exchange, charging, say, only about half rates? I have backgrounds which my customers tire of before they are half worn out, and which would be as good as new to some one in another town. Fellow photographers, what will you give me for them?

JEXTUS.

[In answer to this voice, we would say that, acting on the suggestion, we have opened such a column, and refer those interested to it in the *Specialties*.—ED. P.P.]

PHOTOGRAPHY comes into use even in murder trials. I see one of your correspondents has been through a course of legal sprouts, and used his photographic views to help him equal the lawyers.

VAN.

A BADLY AIMED STREAK OF LIGHTNING.

I FORGOT to inclose money, in the rush of business, the other day, but am now reminded of it by two things—the receipt of your circulars, and a sample copy of the *Prac-(tickle)*; but it had too much Lambert in it for me to tickle very much. They should be very wary of whom they send old

numbers to. Lambert lightning does not strike anywhere around, and I am so strongly carbonized that cremation is "no-whar."

I had a friend who was very anxious to secure the Lambert lightning in advance of all opposition. The career was brilliant, but short; and I understand that when he abandoned the Lambert lightning, it took some time to get used to short exposures again. I wrote to Hon. Lambert when I failed to work carbon, and told him what I thought. His reply was: "Why don't you sell out to Mr. ———." I wrote, and told him I would give him \$25 to sell it for \$75, and I would throw in all the material, etc., I had on hand. He has not sold it yet.

E. B. C.

[We are glad our friend is safe once more.—ED.]

IN congratulating you upon the successful issue of *Mosaics* for 1880, allow me also to offer you my best wishes for the *Philadelphia Photographer* for 1880. Its value to the photographer has as yet only been partly appreciated. In substantiation of my assertion and wishes for its continued success, you will please find inclosed ten dollars as subscription for 1880, thereby renewing my own, and asking you to forward the journal to my apprentice during 1880. You will please forward receipt of his (*my*) subscription-money to him, so that it may be received before Thursday next, and oblige,

JOHN H. HENNING.

[May two thousand and one do this. If they would there would be four thousand and two happier people; and employers, by thus helping their employees to good instruction, would not only get better work produced for them, but get it done more willingly; for a better feeling would exist. Try the experiment once. You cannot do better for yourself, your employees, or for us.—ED.]

HOW IT AFFECTS THE CUSTOMER.

THE January number came duly to hand, with its rich treasures; and I show my customers what honest-thinking photographers say about low-priced work, and it has a good effect.

If I was feeling well, and in a settled

mood, I should like to say something for the encouragement of the craft; but I can only say, keep on publishing "What Photographers Say." It will do us all good, and I believe it will be the means of helping us out of the mire we are in; for it affects most of us, without a doubt.

M. H. ALBEE.

HOW A VOICE FROM NEW YORK STATE PUTS IT.

As the holidays passed away, one by one, and the sound of "Happy New Year" was heard no more, as I sat smoking the Havana, I heard voices from different parts of the gallery saying, "*P. P.*; what is the matter with the *Philadelphia Photographer*? Why don't the *Photographer* come?" Also the little urchin wants to see the picture in the *Photographer*. I at once retired to my sanctum, and opened the big book, and found what was the cause of this confusion. The cash had not been sent. Here it goes for the *Philadelphia Photographer* for 1880; also one copy of *Mosaics*, 1880. Hoping this will be forwarded at once, I remain,

Yours fraternally, W. G. SMITH.

[May two thousand do like *him*.—ED.]

TWO THOUSAND AND TWO MORE SUCH WANTED.

MR. H. I. ELLIOTT, of Marion, Iowa, says: "Thinking to aid you in your good work, I have obtained you a new subscriber to the *Philadelphia Photographer*, besides selling him three books. I think if half of the photographers would send you a draft for \$13.60, as I do, your journal would be better than ever, if that is possible."

[We are duly grateful for such a "say" as that, and always welcome them.—ED.]

DOUGHTY'S METHOD OF INTENSIFICATION.

BY T. M. V. DOUGHTY.

I MADE an important omission in my paper on page 4 of your January issue. I am sorry, but I forgot to say this about my solution for blackening negatives. If any of your readers should try it, and find on attempting to further intensify the negative with silver solution and developer after blackening it, a decided tendency to fog the

shadows, the trouble may be easily avoided by dissolving off the black with a rather weak solution of cyanide, then wash and intensify as much as you please, and the shadows will not fog.

The blackening is more available if the negative is not very intense before applying it. If it was not for the blackening I should do the intensifying by applying silver solution, and redeveloping before fixing.

I like this plan to avoid the nuisance of proofs. Not one in fifty of my customers ever mentions a proof, and I shall never take any pains to get them into any such habit.

Photographic writers dwell much on the idea that we must endeavor to "educate the masses." In my opinion the (m)asses have been educated in *some* direction, one of which is the giving of proofs, altogether too much. I am willing to admit if we could supply some of our customers with a few brains it would be a big thing.

HOW PRACTICAL PRINTERS USE WAYMOUTH VIGNETTE PAPERS.

THE beautiful example of vignetting in our current issue will cause many *queries* to be put, unless headed off by giving the proper instruction for producing results equally fine, therefore our own head printer, Mr. H. A. Webb, gives us his method on another page, (a most excellent one, and the best we have seen by the way), and at our request a few others give us below *their* experience in this line of printing. The first is Mr. C. W. Hearn, who almost exhausted the subject in the second edition of his excellent work, *The Practical Printer*. Since the issue of his book he has found out some new "dodges" in using the Waymouth Vignetting Papers, which he describes as follows:

"The drawing herewith will show how I use the Waymouth Vignette Papers. I do not see how I could make any more drawings illustrative of the *modus operandi* without their being superfluous. I do not consider the process of nailing the strips of board on outside of printing-board (to which the papers are nailed or tacked, as shown in the drawing), as the very best way for

quickness in arranging the papers, but I have the strips constantly near by, and as it does not take many seconds to tack one or two thicknesses on the outside of the print-



ing-frame, for the purpose of separating the paper more or less from the negative to get soft vignettes, I therefore use this way. There are probably many who now use the Waymouth Vignette Papers who, being of a more inventive frame of mind than myself, may possibly have them down finer.

"I have already written considerable about these papers in my book, *The Practical Printer*, and know nothing new besides what is there given, except, perhaps, this one thing: when, after having built up the outside of the frame by means of strips of backboard, and when, upon looking at the print, if there should be too much blending out at the dark drapery of the print, although the grading may be beautiful around the head, it can easily be overcome by removing one or more of the strips of wood nailed on the bottom of the frame, and where the lower part of the vignette paper is placed, and thus bringing that part of the vignetting paper *nearer* to the negative (leaving the rest of the paper as before), and then as the distance between the two is diminished, there will of course not be so much blending.

"Another thing: in placing these papers on, place the negative in the frame first, hold it up to the light with one hand, and match the paper to the negative by placing it on the further side of the frame, and looking through to the light, being careful not to let too much space above the top of the head, as it will then print too dark.

"These are very simple instructions, and probably every one is already aware of them, but it would perhaps do no hurt to suggest them again."

Mr. E. D. Ormsby, Oakland, Cal., was one of the earliest users of the vignetting

papers, and has always been a great advocate of them. He suggested a new size, too (No. 15½), which we have produced and named the *Ormsby* pattern.

Mr. Ormsby's method is also a crude one. All the trouble, once for all, could be avoided by adopting Mr. Webb's plan, and we shall endeavor to induce the

American Optical Company to supply his attachments for the market. Mr. Ormsby says:

"For vignetting papers I cut a piece of cardboard the size of the printing-frame, with a hole in the centre, and tack it to the outside of the printing-frame. I then fasten the vignetting paper to the outside of the cardboard with gum paper."

Of course Mr. Ormsby must use some method (doubtless the same as Mr. Hearn's) of raising and lowering his cardboards.

ATTACHMENT FOR USING WAYMOUTH VIGNETTE PAPERS.

BY H. A. WEBB.

THE Waymouth Vignetting Papers, when properly used, are certainly the best form of vignettters I know of, and they would no doubt be used much more extensively than they are if their advantages were more generally known.

What is required in order to obtain the desired effect with these useful papers has been fully and clearly described, both in Hearn's *Practical Printer* and in the *Philadelphia Photographer* for October, 1878.

In working with them, I found that some more practical plan was needed for adjusting them, so that the distance from the vignette paper to the negative could be increased or diminished as occasion required, and also that some arrangement was necessary, in order that the vignette paper could be moved crosswise or lengthwise, and then secured in its proper position when adjusted, without the necessity of turning the frame around, and at the same time running the risk of misplacing the vignetting paper.

These advantages I obtained by having an attachment made for the front of the printing-frame, secured to the latter by

means of small hooks, so that it can easily be attached or removed with the least possible trouble or loss of time.

The attachment consists of a light wooden frame, *N*, about half an inch thick and one and a quarter inches high. Four horizontal grooves are cut on the inside of three of the pieces forming this frame, one-eighth of an inch wide, one-quarter of an inch deep, and at equal distances apart, say about like the grooves in a negative box.

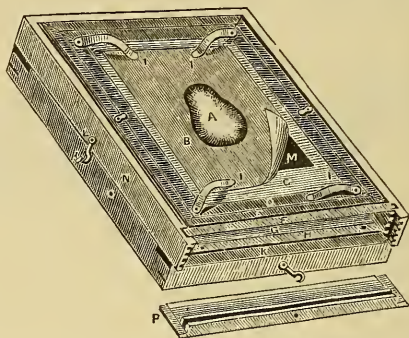
The three grooved pieces are secured together either by dovetailing or mitreing, the two side pieces being a little longer than the printing-frame. There are also vertical grooves cut near the ends of these side pieces, so that the other cross piece, *P*, can slip in.

And now comes the sliding front, *C*, which can be made of one-quarter inch wood, and the edges planed down so that it will slide in and out of the horizontal grooves. An opening is cut in this front about one and a half inches smaller each way than the vignette paper, to allow for the adjusting of the vignette. At each corner of this frame is a small brass spring, *I*, for retaining the vignetting paper in position. The position and size of opening in this front will depend upon the size of the negative used, and the position of the image upon the negative. For example, if the image is a 4-4 or cabinet size, made in the centre of the plate, the opening would be cut in the centre of the front. If, on the other hand, you want to print from a card or cabinet negative with two on a plate, the opening would need to be cut nearer one end, and since, as a general thing only one end of the negative is ordered from, the front can be reversed to print from either end, or two openings can be cut, and both ends of the negative printed from at the same time.

Small pieces about one-eighth of an inch thick should be tacked to the printing-frame, so that the attachments can fit up against them, and thus make it more firm.

The drawing will make my design well understood. An ordinary flat printing-frame, *American Optical Company's* make, *K*, is used. *A*, is the lithographic design; *B*, the non-actinic paper support; *C*, the wooden front, divided like a kit frame into the parts *D* and *E*, to suit various sizes; *F*,

is the groove for the vertical sliding end; *H*, the negative; *L*, is one of the hooks fasten-



ing the attachment to the printing-frame; *M*, the vignette paper turned up at one corner to show the inside arrangement; *N*, one side of the grooved frame, at the end of which the grooves are seen. The frame may be made 8 x 10 size, and divided into kits, so that it can be used for a large or small negative.

Now the *modus operandi*. The pieces forming the three sides of the attachment are hooked to the printing-frame. The front, having the opening cut out and the springs on, is now slid into the side grooves; the end piece is slipped in and hooked; and now the frame has a covering excluding all light but that passing through the opening over which is placed the vignetting paper.

We will now examine a negative that is to be printed, and select a vignette paper that will be likely to suit. If a cabinet head of a lady or a small cabinet head of a gentleman is desired, No. 15 of the vignetting papers will probably answer. We will suppose a case—a three-quarter length of a lady. For this No. 16 will be the most suitable size. If the negative is smaller than the frame (for instance, a 4-4 negative and an 8 x 10 frame), the vignetting paper can be secured by means of the springs first, and the negative moved in the printing-frame to suit the vignetting papers; of course, examining it by transmitted light. But if, on the other hand, the negative is the same size as the frame, the frame is held up to the light, and the vignetting paper moved, so that the top of the opening will just clear the top of the head. Then one spring is moved over, on the top, and another on the

bottom of the vignetting paper, and your frame is now ready for filling.

We will suppose that the front of the attachment was slid in the grooves nearest the frame. Upon examining the print the first time, we find that the halo is printing too sharp. In such a case we remove the end piece, draw out the front, and place it in the third groove, or next to the top one; the end piece is then replaced, and no further adjustment of the vignette is necessary.

This change is made in less time than it takes to write this. We examine it again; it is not printing with sharp edges, but it is not blending out, and bringing in quite as much of the figure as we desire. We remove the front again, and place it in the highest groove, which will remove it about one and a half inches from the negative; and so without changing the vignetting paper, we can vignette this three-quarter figure out to the edge with a beautiful and delicate gradation that it is almost impossible to obtain in any other way.

LIGHTING THE DARK-ROOM FOR GELATINO-BROMIDE PLATES.

BY THOMAS GAFFIELD.

SYMPATHIZING with the many efforts which have been made by your patrons to solve the problem of properly lighting the dark-room, since the introduction of gelatino-bromide plates, I had recourse to the table which was furnished by me in your journal of October, 1876, in which it was shown that a combination of red and blue glass, or red and green, would cut off more of the chemical influence of light than the red glass. I accordingly consulted with my friend, Mr. Augustus Marshall, of 147 Tremont Street, Boston, and made an examination in his studio of various combinations of red with other colored glasses. The problem to solve is to obtain a medium which shall sufficiently illuminate the dark-room for the manipulations of the operator, and at the same time cut off sufficiently the chemical influence of the light to prevent any fogging of the gelatin plates.

We found that red and green, red and blue, and red and purple, would cut off too much light, while two reds, or red and orange, and

red and yellow, would be too dazzling for the eyes of the operator. Mr. Marshall suggested the grinding of the red or ruby glass. I accordingly had two dark ruby glasses ground on the colorless side, and on yesterday we made a full and careful experiment with Mr. Carbutt's gelatin plates in a dark-room, prepared by darkening the window of his toning-room, which faces the south, and by leaving an opening about ten by twelve inches for the ruby glass.

At about noon, the sun shining brightly while the experiment was going on, I sat while Mr. Marshall took four negatives, each occupying only six seconds, and each of which was developed in about a minute; two behind one, and two behind two thicknesses of the ruby ground-glass, and neither of which was fogged in the least degree. The grinding of the glass had removed its dazzling effect, and produced a mellow and diffused light in the room, sufficient for the manipulations of the operator.

Mr. Marshall was entirely satisfied with the experiment, and delighted with the successful working of Mr. Carbutt's gelatin plates. We think that the dark ruby ground of two thicknesses can safely be recommended as the proper glass for any dark-room, from whatever direction the light may come, or however strong it may be. If it be in a dark corner of the building, perhaps one thickness of the ruby glass may answer. This can only be ascertained by actual experiment.

If any photographer has ruby already glazed in his window, he can produce the proper and protecting effect of ruby ground by fastening in the sash a light of plain ground-glass, before or behind the ruby glass. If this be not sufficient, a light of ruby ground added to the window will probably accomplish the object desired.

I ought to say to your readers that there is quite a difference in different sheets of ruby glass as sold by our glass dealers. Some are flashed with quite a thin coat of color, while others have a much thicker, and consequently much darker, coat. One of Mr. Marshall's ruby lights cut off as much as two of another kind with which I compared it, and which was about of the ordinary tint.

If you are convinced of the efficacy of the ruby ground for the purpose named, I hope that you will be able to publish my note in your March number, and satisfy a host of photographers on both sides of the Atlantic, who are using all sorts of colored paper, and other substitutes for ruby glass in the dark-room.

BOSTON, February 20th, 1880.

VICK'S ILLUSTRATED FLORAL GUIDE.—We thank Mr. VICK for sending us this elegant catalogue of his delightful stock in trade. The book is handsomely gotten up, and contains over 500 illustrations of plants and flowers, besides an extra colored plate. Send a five-cent stamp and get a copy from one of the oldest established florists and seedsmen in this country. Address JAMES VICK, Rochester, New York.

SOCIETY GOSSIP.

CHICAGO PHOTOGRAPHIC ASSOCIATION.—Adjourned meeting January 21st. After the election of the officers, announced in our last "Gossip," and an address by the Secretary on the organization of the "Photographers' Association of America," the following communications were read:

"DEAR SIR: In obedience to your request that I furnish something concerning the new gelatino-bromide dry plate, for the meeting of the Chicago Photographic Association, upon the 21st inst., I sent you the accompanying negative, made with a gelatino-bromide plate, prepared by Mr. Jay Densmore, of this place, and a print from the same. Six months ago, Mr. Densmore began his studies of the gelatino-bromide emulsion, and he has surmounted all difficulties with persistent energy, and is producing perfect plates, that, in my hands, yield most gratifying results. From a careless skeptic, I have been converted to a firm believer in the new candidate for photographic honors.

"The negative that I submit herewith, made to-day in my gallery with one of Mr. Densmore's plates, will show to the members of the Association the success that has attended his labors. I used a one-half size Voigtlander & Son's tube, and gave just *one-half* the time that I would have given

had I been using a wet-collodion plate. (I will state in this connection that it was not Mr. Densmore's intention, in preparing this plate, to gain great rapidity so much as certainty and reliability in other respects. He is, however, able to gain great rapidity by simply extending the time of emulsification.)

"The development was very easy, simple, and beautiful, the negative coming up readily to its present density under the action of the developer upon it. I send it unvarnished, and without retouching, in order that it may be the better examined by the curious. I shall, in future, use the plates in my gallery.

"Fraternally yours,

"W. S. WHITE.

"KALAMAZOO, MICH."

GELATINO-BROMIDE DRY PLATES.

"The receipt of the circular of the Chicago Photographic Association, last Saturday evening, announcing the meeting for Wednesday evening, January 21st, was the first intimation that I had received of the time of meeting, or the important character of the matters then to be considered. Nothing would afford me greater pleasure than to attend such a meeting, and participate in its deliberations, but the time is so short that I find it impossible to do so. I am, however, so deeply interested in the matter of gelatino-bromide dry plates that I cannot omit sending a few pen-and-ink notes in regard thereto, even though the time for their preparation is so short as to require great brevity.

"During the last six months, I have made the gelatin dry-plate process my exclusive study, my faith in its ultimate triumph as the best and leading process for producing the finest negatives, both in the studio and in the field, causing me to think that such an outlay of time and effort would be well spent. I made practical tests of all the published methods of working the process; encountered and grappled with the many practical difficulties that all experimenters with the process unhappily know of, and have finally succeeded in producing plates that work with great certainty and regularity of results; far more so, in fact, than the wet-collodion process.

"The difficulties encountered were many—much too numerous for even a mention in this necessarily brief article; but the chief of them were blisters, frills, spots, stains, difficulty to get an even film upon a slightly uneven or warped piece of glass, and lack of intensity in the finished negative. The matter of 'fog,' 'red' and otherwise, so much complained of by many gelatin workers, strange to say, I escaped entirely. Why I should have been so favored in this direction, from which I anticipated so much trouble, and suffered so seriously from other causes from which little or no damage was apprehended, I am unable to state, unless, perhaps, it may have been timely warning and consequent protective vigilance in the one case, and the lack of it in the others.

"Blisters and frills tried both my patience and ingenuity sorely, until I succeeded in studying and experimenting out a method of preparing the emulsion and plates, and coating the plates, that caused those annoyances to vanish suddenly. My plates now develop and fix as smooth and clean as wet-collodion plates, the films of the one being as strong and firm as the other; and that, too, without the necessity of using spirits, or other guards against blisters and frills, in the developing and fixing solutions.

"Spots, stains, etc., I found to proceed from impurities in the gelatin, which I overcame by devising a method for purifying it before its use in the emulsion. Much of the uncertainty attending the gelatin process heretofore has resulted from this cause. I am now using common gelatin, that can be bought in nearly every country store, and have no trouble from spots, stains, or the many other annoyances that so frequently are traced to the gelatin used in the emulsion. By my method of working, any good gelatin will answer. This I deem an important improvement.

"The practical difficulties arising from the methods of redeveloping or intensifying gelatin negatives now in use, led me to seek diligently for a means of preparing and developing a plate that would render the necessity for an 'intensifier' of rare occurrence. I have succeeded so well that I believe a very little experience in the use of

my plates will enable any good operator to dispense with the 'intensifier' altogether.

"Space will not permit me to enter into details now; and I can do no more than simply to call the attention of the Association to my plates, leaving to the future the task of acquainting its many intelligent members more fully with their merits.

"I have been laboring to bring the process to a degree of perfection that will enable individual photographers to prepare their own plates, with the same certainty that they now work wet collodion. I am of the opinion that the new process cannot become universal in practice so long as photographers are compelled to purchase their plates ready made. I shall soon be able to furnish an article to the trade that will enable photographers to prepare, in an hour or two in an evening, reliable, rapid gelatin dry plates sufficient for several days' use. I shall also furnish plates ready prepared to those who prefer them that way; but my plan for enabling operators to do their own coating and drying plates will be so satisfactory that I think few will want their plates ready made.

"The advantages of such a method are obvious, and need no elucidation. I am not yet prepared for a public exhibition of my plates; but I to-day placed in the hands of Mr. W. S. White, of this place, one of my plates, with which he made a negative. He will make prints from such negative, and forward them to the Secretary of the Association for your inspection.

"Before the next meeting of the Association, I hope to be able to make a more elaborate exhibition of my method of working the best negative process now known. In the meantime, I shall be pleased to communicate with any photographer interested in the process.

JAY DENSMORE.

"KALAMAZOO, MICH., Jan. 19th, 1880."

The negative and print were handed round for inspection, and criticised very favorably.

On motion, a vote of thanks was tendered Messrs. White and Densmore for their communications and the accompanying negative and prints.

Mr. Nellis exhibited Levy's non-actinic lantern, and Mr. Davis showed one of his

own construction, that seemed perfect. He uses kerosene, with an Argand burner. The glass chimney is covered with a ruby globe, to which is fitted, at the top, a tin extension with ventilated cap. No reflected light from the burner can escape, and nothing but the illumination from the ruby globe is imparted.

The Secretary read the following cautionary extract from a letter of Mr. Densmore's:

"While light is the great servant of the photographer, I find it a very troublesome one sometimes, that delights in stealthily creeping in unawares, at improper times, and doing mischief. Not only the dark-room, but the camera also must be watched, and the entrance of light carefully and totally excluded, except through the red glass in the one and the lens in the other. I do not think that one-quarter of the cameras now in use will work gelatin plates; and photographers' dark-rooms generally are worse than their cameras. This being the case, I should expect that good plates, sent out with printed instructions only for their working, would fail of producing satisfactory results. The photographer receiving them would quite likely fog most of them, and then condemn the process, and declare the man who made them a fraud."

Mr. HESLER.—I desired to experiment with the gelatino-bromide dry plates, and sent to Mr. Carbutt for a supply. As the reglazing of my dark-room with ruby glass would cost considerable, I took some dragon's blood (about half a pound, costing thirty cents), dissolved it in some old red collodion I had, brushed it over the glass, and, when dry, varnished it with shellac-negative varnish. For my light to develop by, I took a bottle that nicely covered my lamp, cut off the bottom, and covered that with the dragon's blood, collodion, and varnish; and at a trifling expense, I was prepared with ruby light to work successfully the plates I received. I am greatly pleased with the results thus far. Of course, you have got to learn how to use them; but they give promise of perfect success. I think, for many purposes, and possibly for all, they will, at no far distant day, supersede the wet-collodion plate. The advantages are many.

Your plate is always ready. You need not hurry with your posing, for fear the plate will spoil; it is ready when you are; after your exposure, there is no haste for development; and numberless advantages that must appear to all who work the camera. One great advantage over the wet plate is the shortening of the exposure. I claim to work as rapid as any known process; but I find that Carbutt's plates work from one-quarter to one-third quicker, and that is a great point gained.

Mr. Smith, for the committee who tested the Scotford gelatino-bromide dry plates, reported as follows:

"We found the plates poorly prepared. Many of them, having patches insensitive to light or developer, developed very slow. The formula for developer seems to be burdened with too many chemicals, and the manipulations are too complicated. Chrome-alum seems to be the important factor in the formula. The best result from the Scotford plates was made with an old and simple developer. The plates, in our hands, have not proved a success."

On motion, the report was received, and committee discharged.

Mr. Davis exhibited a negative made with emulsion prepared by himself; time of exposure, ten seconds. The negative was perfect, and the prints shown from it very fine. Mr. Davis also exhibited a print made from a gelatino-bromide negative that had been dried too hurriedly, and the gelatin run, showing a remarkable piece of architecture, and placing on record another caution for those working the gelatin plates.

THE SECRETARY.—Our call notified you that Mr. Scotford would be here to-night, to exhibit his method of working the gelatino-bromide plates. A letter from him stated his intentions to be with us to-night; but he has disappointed us. But we have Messrs. Smith and Hesler here with exposures made on Carbutt plates, and they will proceed to develop them.

Mr. Smith then developed—using the Davis lantern—six plates, with exposures varying from one to eight seconds. Some showed a little lack of time; but all were satisfactory exhibits of the capabilities of the

plates, and demonstrated that Mr. Carbutt is offering uniform and perfect films that, in the hands of any good photographer, will produce the finest negatives, and replace the present wet-collodion method.

Mr. Hesler developed some Carbutt plates, the best one being a cabinet head made with a 3A Dallmeyer and No. 3 stop in six seconds, at 4 o'clock P.M., on a dark, cloudy day. This exposure, with the wet collodion, would have required at least thirty seconds.

The Secretary exhibited a number of cabinets made with gelatino-bromide plates, by the celebrated Ferranti, of Liverpool, England. They were greatly admired.

Mr. Edgeworth exhibited his cardboard plateholders for dry plates, which idea Mr. Greene had suggested, and he had perfected. He stated that he had successfully made a

holder for 8 x 10 plates reversible. The cost of the 5 x 8 holders was fifty cents each. This inexpensive novelty was of great interest, as it allowed the dry plates to be used rapidly, and in the most secure manner. Mr. Davis had made a diagram of the 5 x 8 holder, with description, and distributed duplicates to members desiring them.

Subscriptions for the year for the *Philadelphia Photographer*, the *St. Louis Practical Photographer*, and *Anthony's Bulletin* were donated by the publishers.

A vote of thanks was tendered Messrs. Anthony & Co., Fitzgibbon, and Wilson, for the journals. G. A. DOUGLASS, Secretary.

[Further "Gossip" of the last meetings of the Chicago and Philadelphia Societies will be found in our supplement pages.—ED. P. P.]

Editor's Table.

PICTURES RECEIVED.—From Mr. H. W. IMMKE, Princeton, Ill., a number of very fine stereoscopic views, which are all very clear, having great depth and softness. Another lot of the same sort are from Mr. T. S. JOHNSON, Thornton, Ills. The one that pleases us most is an instantaneous view of two vessels on Lake Huron. The negative was made from the deck of a propeller whilst in motion. The swell of the waves catching the glitter of the sunshine is perfect. Mr. J. D. CADWALLADER, Marietta, Ohio, and Parkersburg, W. Va., sends specimens of his cabinet and panel pictures. Lighting, posing, and chemical effect very good. "Little Agnes," his daughter, makes a charming picture. A couple of card bust pictures from Mr. A. B. GARDENER, Utica, N. Y. From Mr. J. A. SHERRIFF, San Diego, Cal., several cabinet photographs of ladies and children, in various positions. Card pictures from Mr. KARL KLAUSER, Farmington, Conn.; one of these represents two little girls seated in a perfect bower of natural flowers, their sweet faces peeping out like blossoms of a larger growth. Mr. FRANK JEWELL, Scranton, Pa., sends us a couple of very spirited snow scenes. The lady is holding on to her umbrella, while her dress waves in the rushing, blinding snow-storm. This is one of the best pictures of the sort we have seen. There is real life and go in it. From Mr. W. C. North, Utica, N. Y., some very taste-

ful novelties in boudoir size for children's pictures. The border (printed in) is a very graceful composition of wild flowers, partly trailing in the waters of a pebbly brook, and the portrait of the child is printed in the centre, and very slightly vignetted. The effect is very pretty, especially in one where the border negative has been reversed, and the added softness throws out the portrait in bolder relief. Card samples from Mr. J. PAUL MARTIN, Boone, Iowa. Mr. MARTIN is one of our progressive men, and we are glad to see he is not standing still. From Mr. E. D. ORMSBY, Oakland, Cal., a beautiful soft vignette, printed with a No. 15½ Waymouth Vignette Paper. We have named this size after Mr. ORMSBY, as it was at his suggestion this pattern was adopted. Our picture this month is printed with this size vignette, and we would call attention to the various methods given, on another page, by some of our best workers, showing their ways of attaching the paper to the printing-frame. Some samples of outdoor photography from Mr. S. R. STODDARD, Glens Falls, N. Y.; of course, very fine. When we say samples of his work, it will at once be understood that they are gems—photographic triumphs. Mr. STODDARD's pictures are too well known to need our *praise*; suffice it to say, the views now before us are equal to any other of his work. From Mr. CHARLES DEAN, Sycamore, Ill., a snow picture, representing a gentleman driving

in a sleigh. The action is good, and he really looks as though facing a northeaster. From Mr. C. F. MOELK, Fort Worth, Texas, various samples of his cabinet pictures, including a portrait of himself. Mr. MOELK is but 25 years of age, almost entirely self-taught, and now sole proprietor of his gallery. Cabinet and promenade pictures from Mr. RUSSELL, Blossburg, Pa. From Mr. W. LATOUR, Sedalia, Mo., a varied set of specimens of cabinet, panel, boudoir, and promenade. Subjects are ladies, gentlemen, and children, with snow-storm, outdoor scenery, and drawing-room accessories. The most striking of all are the bust pictures, in imitation of statuary. These are made in the ordinary manner, the only requisite on the sitter's part being white drapery and powdered hair. The background is all cleaned off the negative, and a suitable pedestal etched on. The effect is very pretty for young ladies and children. In a photographic point of view, Mr. LATOUR's work is most excellent in every department. From Mr. LAMSON, Portland, Me., a large card head of a little boy. From Mr. CROCKETT, Rockland Me., two cabinet vignettes, which are excellent in every way.

Several cabinet photographs, including portrait of himself, from Mr. A. F. BURNHAM, Fairbault, Minn. These samples show care and good judgment in every department, and prove that the head of the establishment thoroughly understands his business. Mr. BURNHAM has left Fairbault for an extended trip through the South and Southwest. He intends making views of all picturesque points on his route; visiting photographers, and offering his services as instructor to those who are desirous of such assistance. We can heartily recommend Mr. BURNHAM as a gentleman, as an excellent photographer, and as an able teacher in all branches of his profession. We know there are many photographers in remote sections who are greatly in need of just this sort of help; men who get in a fog and cannot tell how to clear it away. To such the advent of a cool-headed, sharp-seeing helper would prove a boon of life-long value, and we hope Mr. BURNHAM will meet with the ready welcome from one and all which he so fully deserves. We wish him success most heartily.

THE *Washington Republican*, Washington, Ill., gives a flattering notice to its local photographer, Mr. T. B. WILSON.

MESSRS. WILSON, HOOD & Co., dealers in photographic goods, 825 Arch Street, Philadelphia, send us their three illuminated price-lists of GEORGE KNELL & SON's photographic chairs, for

which they are trade agents; of ROSS and STEINHEIL lenses, for which they are sole agents in the United States; and their list of articles in everyday use in every department of the photographic establishment.

PRICE-LIST received from MESSRS. CHARLES COOPER & Co., manufacturing chemists and importers, 191 Worth Street, New York. This firm now announce that they have commenced the manufacture of polishing materials of every description, and are prepared to furnish the best goods at lowest market prices.

MESSRS. A. M. COLLINS, SON & Co., Philadelphia, have announced to the public that the unexpected rise in cost of materials used in card manufacture has obliged them to increase their prices ten per cent. for mounts. It is hoped and believed that the prices will now remain firm for some time.

COLLINS vs. REYNOLDS.—MESSRS. A. M. COLLINS, SON & Co. have sent us a pamphlet containing the arguments used in their suit against the Reynolds' Card Manufacturing Co. for appropriating their (COLLINS') trade mark. The decision of the Supreme Court was in favor of the plaintiffs, and very justly so in our opinion, as we expressed ourselves some time ago, when referring to this case.

MESSRS. DOUGLASS, THOMPSON & Co., the enterprising young stockdealers of Chicago, have determined to issue a monthly pamphlet called the *Photographers' Bureau of Information*. Their design is to bring about a closer mutual acquaintance between the two classes of photographers, the employer and the employee. We are sure the work is founded on a solid basis, and we wish it all success. The following extracts are from the introductory of the first issue, February, 1880:

"One of the essentials of a gallery assistant should be a good text-book and a journal. Employers would find better service from their employees if they insisted on more intelligence and a little study. Every photographer should be a constant student of their art-science, and aside from daily companionship with one or more of the manuals of photography for study and reference, they should keep pace with the steady advance of their profession by reading the journals served them, monthly or weekly. If you are not one of the reading class, commence now. In a year you will find yourself in love with your profession, respecting yourself more, your finances will improve, you will dress better, feel

better, and live happier, and longer, and we hope bless us for starting you right. 'Knowledge is power.'"

SAN FRANCISCO STOCK-HOUSE.—Mr. OSCAR FOSS, so long and well known to the fraternity, has the largest stock depot in San Francisco, Cal., and now takes the lead of other dealers in that city. We doubt not he will be successful in his undertaking. He knows the wants of the trade, and means to supply them. Photographers of the West, give him a trial.

OUR friend, Mr. E. D. ORMSBY, formerly of Oakland, latterly of San Francisco, Cal., after giving the larger city a thorough trial, has grown homesick, and returned to his old home and patrons in Oakland. He is now building a skylight on an improved plan, and we hope to give our readers a full description thereof in a coming number.

MESSRS. GATCHELL & HYATT, the well-known stockdealers of three cities in the West and Southwest, proprietors of the Patent Retouching Machine, and agents for Wolfe's Solar Process, write us that they are in receipt of orders from Spain, Australia, and other distant foreign points. They add: "We give your journal credit for these orders." This is quite a feather in our cap. At the same time, we feel quite safe in prophesying further orders for our friends from Africa, China, Japan, India—in fact, any or all of the foreign countries where photography has a foothold; for our journal goes every month to its various subscribers in these distant lands across the seas.

WILL OUR FRIENDS HELP US?—"Your circulars for 1880 received. I am fully conscious that the *Photographer* is invaluable to an artist who is determined to keep pace with the times; and I shall always use my influence in its behalf. A short time ago I returned from Europe, and it gives me great pleasure to state that I saw the *Photographer* in some of the best galleries there. I hope your worthy journal may ever flourish and meet with unprecedented success."—N. GOLDSBROUGH.

If all our friends would use their influence in raising clubs, or sending in new subscribers, we could reward them by making our journal better and handsomer. Our new confidential circular is out, and we will gladly send it to any one on request. We are now making most liberal and unprecedented offers to subscribers and purchasers of books. Help us, kind readers, that that which you enjoy may become yearly a

wider-spread means of instruction, help, and pleasure to you.

NEW STOCK-HOUSE IN PORTLAND, ME.—This enterprise was lately started by Messrs. J. D. DEXTER & Co. (Mr. M. F. KING forming the Co.). The latter gentleman called on us a short time before their opening, and we were glad to make such an agreeable acquaintance. We believe there is a good business future in store for them, and wish them all success. Photographers, send for their price-list, and give them a trial this spring.

ILLUSTRATIONS OF THE HISTORY OF ART. This is the general title of a series of five splendid volumes of engravings, selected from the works of KUGLER, LUBKE, BUCKHARDT, OVERBECK, DOHME, C. VON LUTZOW, FALKE, WOLTMAN, LACROIX, and others; the whole forming a most complete collection for the study of art history. The set is as follows: I. Architecture, Sculpture, and the Industrial Arts among the Nations of Antiquity. Thirty-nine plates. \$1.50. II. Architecture and Sculpture of the Christian, Romanesque, and Gothic Periods; Architecture and Ornamentation of the Mahomedan Nations. Fifty-seven plates. \$2.25. III. The Architecture and Sculpture of the Renaissance Period, and of Modern Times. Forty-eight plates. \$2.00. IV. The Industrial Arts among the Oriental Nations and the Nations of Europe, from the Middle Ages down to Modern Times. Forty-two plates. \$1.75. V. The History of Painting from the Time of the Egyptians to the Close of the Eighteenth Century. Sixty plates. \$2.50.

In the whole series there are above two thousand wood-cuts, splendidly printed on heavy plate-paper, each volume bound separately.

Here is an opportunity for photographers to secure for study a magnificent collection of engravings at very low price, of just such subjects as will benefit them in their daily avocations, and come in very good with Mr. BURNET'S essay on the *Education of the Eye*, now being reproduced in our pages. Moreover, it is promised by the publishers that a short descriptive text will shortly follow in the form of an 8vo. volume, thus making the illustrations an encyclopedia of art, conveniently arranged for reference. We shall review this work when issued.

The low price puts them within the reach of all, and we heartily commend them to all who love art enough to want to study its principles and history, or whose desire to improve their own work is strong enough to induce them to gather help from such admirable sources. Messrs.

PRANG & Co. have done much good in the issue of art helps, and this is their crowning effort. The five parts are independent of each other, and are sold separately.

MR. W. E. BOWMAN, Ottawa, Ill., sends a cabinet portrait of a little Alaska boy in his native fur costume. The little fellow has a sad history, and Mr. BOWMAN, after taking his picture, now kindly offers to sell them, presenting the proceeds to the boy. ELBRIDGE SUYDAM BEAN is a bright little lad, little less than five years of age, and enjoys the distinction of being the only native Alaskan in the United States east of the Rocky Mountains. The father was a fur-trader among the Russians and Indians. On the morning of September 11th, 1878, Mrs. BEAN was getting breakfast for her little family, and for two Indians who had slept in the house the night before, when she was ruthlessly shot from behind by one of the Indians, and instantly fell dead across the very table which she was setting forth with food for the entertainment of her assassin. The savages attempted to kill her husband and little ELLIE, the subject of our sketch and photograph, and but for fear of returning trappers would have very likely succeeded. They had been freely indulging in "fire-water," and seemed bent on plunder, or the avenging of some fancied wrong. Mr. BEAN, with his boy, finally succeeded in escaping, and returned to San Francisco. After the horrible death of his mother, little ELLIE clung to his father with renewed tenacity, and could scarcely endure a moment's absence from him. But in December last Mr. BEAN, having determined to go back to Alaska, and, if possible, punish his wife's murderers, and strive to regain his lost wealth, looked about for some means of sending the boy east, and finally committed him to the loving charge of his grandmother, Mrs. E. G. SUYDAM, of Newark, Ill., with whom he now is. ELLIE is an unusually bright child, affectionate to an extraordinary degree, and of pronounced nervous temperament. Besides English, he speaks Russian and the Indian dialect with equal fluency. So we leave the little Alaskan, hoping that the simple tale of his short but troubled life may gain for him sympathy and help from all kindly people, and may effectually teach to all who read it the duty of fighting in every manly manner, and to the death, the enemy that brutally and cowardly murdered poor ELLIE's mother—whiskey. Copies may be had of Mr. BOWMAN, Ottawa, Ill., for thirty cents. This picture forms an interesting one to add to any collection. Remember in purchasing one, the money you send will go to the motherless little boy.

MR. C. W. HEARN, who now officiates at the camera in the Peck gallery, Portland, Me., sends us some specimens of his work, his own throughout, negative, retouching, printing, and finishing. They are "practical" proofs of the theories advanced in his excellent book on printing. Some may consider this an advance for our young friend, to have stepped from the printing-room to the skylight. But, in our opinion, the artistic printer ranks equally high with the artistic operator, for so much of the ultimate success of the sitting depends on the manipulation of the negative after it has left the operator's hands. Several 8 x 10 views of St. Johns, N. B., including views of the harbor, shipping, and landscape in the vicinity of the city. They are all very interesting, and show good photographic knowledge; one view in particular, of the wreck of the steamship Arizona, whose bow was completely demolished by collision with an iceberg.

MR. C. S. ROSHON, Harrisburg, Pa., referring to our remarks on Mr. J. A. W. PITTMAN's group of the Illinois Legislature, begs to say that *his* group of the Pennsylvania House is much larger, being composed of 204 members, represented in cabinet size, and arranged on a card 65 x 85 inches.

MR. G. G. ROCKWOOD, New York, desires to say to his patrons that the early difficulties attendant upon his introduction of the electric light into the solar printing department, have now all been overcome, and he is prepared to fill orders with promptness and exactness during all kinds of weather. (See his advertisement on another page.)

A NEW ORLEANS daily states that Mr. THEODORE LILIENTHAL has sued WILLIAM WASHBURN, Esq., for infringing on his exclusive right to work the carbon process in that city, and has applied for a writ of injunction.

WE have heard with regret of the death of Mr. JAMES H. PIERCE, photographer, at Grenada, Miss. Mr. PIERCE was highly respected and well known among his colleagues in Mississippi, and his loss will be widely felt.

WE hear that Mr. M. WOLFE, Dayton, Ohio, is delighting the people of that city with his entertaining "Sunlight Journeys," as the local papers aptly but not exactly term them. In other words, Mr. WOLFE is giving a series of successful magic lantern exhibitions. Last fall he wisely equipped himself with a first-class lantern outfit, and now he and the people of Dayton are reaping the benefits of it, as we see by the flattering notices in the newspapers of the city.

Supplement.

SOCIETY GOSSIP.

(Continued from page 93.)

CHICAGO PHOTOGRAPHIC ASSOCIATION.—

A regular meeting was held in their rooms, 229 and 231 State St., Wednesday evening, February 4th, 1880.

Mr. Greene, the retiring President, spoke as follows:

"*Gentlemen*: Before handing the gavel to my honored successor, Mr. Rocher, I wish to say a few words of thanks and encouragement. To those who have met with us from month to month it must have appeared a promising sign to see the steady increase of numbers, and the renewed interest of members. Our meetings have been well attended, and subjects brought forward each month for our entertainment and investigation that have been both interesting and profitable, not only for our own members, but the fraternity at large, as the minutes have appeared. Some of our meetings during the past year have been of special value, and thanks to the generous distribution of notices by our Secretary, has called out nearly all of the city photographers, and many from the surrounding towns. I think the coming year looks more favorable for a grand rally than any time since the organization of this society. The present epoch is specially favorable for the growth of our Association. The many new forms of investigation, and adoption of new methods, for producing copies of animate and inanimate life, invigorates the thought and nerves the hand of the devotees of our art-science to greater and continued efforts. You can see that the best place to investigate, and find out what is going on in your profession is in these society meetings, and it must appear that as you are interested in them, you not only benefit yourself, but add dignity to the calling that allows you a living, and help your fellows who are marching along under the same banner.

"We have at the present time a very interesting and important subject for investi-

gation, one that may soon turn the time-honored bath and collodion out of doors, and instead of the black, unwholesome looking digits, now the distinguishing mark of our profession, you will find the craft with clean hands and garments unspotted. I speak of the gelatino-bromide dry plates now under investigation, individually and as a society.

"The near future, I think, will see the wet plate replaced by the dry. Our English and European friends have made great progress in this work, and in some studios the wet process has been laid aside entirely, and at our last meeting were exhibited some cabinets made by the celebrated Ferranti of Liverpool, who, it is asserted, uses the gelatino-bromide dry plates exclusively. His examples are certainly equal to any made with wet plates, while for landscape work they are having the entire field.

"We do not care to be left behind by our friends 'across the water.' It is true I think that they excel in landscape photography, but in portraiture we are, even in our own city, the peer of any in the world.

"Now we must 'lay our heads together,' and see if we cannot do as well with these dry plates as others. We shall progress faster by comparing our work, aiding each other. It requires but little from each one to make our meetings in the highest degree profitable. I think the gelatino-bromide work will wake up and bring out every photographer. Let us see who will make the greatest progress this year. With Mr. Rocher, our President, and Mr. Douglass, our Secretary, who never tires of hard work, I think we shall surpass our most sanguine hopes.

"I have a word for the new society; not the revival of the National Photographic Association, for that is dead and buried, but a new one that shall live and thrive. I would have it hold its meetings in some one place, with a grand exhibition each year, and would have something offered to stimulate photographers to work. Not that I

would offer just yet any premiums, but ask work for criticism, which should pass the ordeal of inspection of a competent committee, and the result published. We ought not to assume the title of artist without accepting the penalty or reward of fair criticism.

"Thanking you for your kind assistance during my term of office, I take great pleasure in introducing your new President, Henry Rocher, Esq."

Mr. Rocher, on taking the chair, said: "Our Secretary informed me of your pleasure, and I am here to-night in obedience to your wishes. I hardly know as to my special fitness for the task before me, as I may be good in one place, and fail entirely in another; but I will try to serve you acceptably. The objects of our Society, and the necessity of combined effort, is so often impressed on your minds, and each individual knows it so well, that I will not weary you with any repetition. I want to add my assent to the work started, looking towards the forming of this new society. The old N. P. A. is dead and gone, but the memory of its usefulness is still with us. In this work, remember you require a good foundation; we must only make the start after mature thought; and having determined the need of this proposed organization, carefully weighed the labor and expense with the value of the benefits to be derived from conventions and exhibitions, and the decision reached that it should be done, go on with the work with unceasing and unflagging energy, until the labor is accomplished, and the Photographers' Association of America is a living fact. This society can be the nucleus for the greater one to come. I am not one that believes wholly in the technical benefits accruing from this associated life. I feel that the community of interests reach out beyond the chemistry, optics, art, and mechanics of our art-science, and take hold of the morals of the craft. I want all engaged in the profession to respect themselves more, and the public to honor us in a larger degree than they have. I shall give you my hearty support in all these efforts. Our exchanged opinions should be honest and fair, not tinged with envy or sarcasm. No feelings other than friendly should be engendered

here. A good student is willing to be taught, and not take offence; and we are all students. As a general thing, we have too much conceit. We must all see there is a great deal to learn. I want to have it understood that when we bring here our best productions, they are open for criticism; and all should be free to express their ideas. Some may be able to see faults quicker, and to explain them better than others. In whatever pertains to art matters, we should have a competent art-critic to judge our works. If you will give me your support this coming year, I think we will all be benefited."

On motion, the following were proposed for membership, and elected: H. D. Garrison, M. D., W. T. Belfield, M. D., J. H. Scotford, Lansing, Mich., G. A. Ayres, J. B. Pelgrift, New York, and O. Hakaleir.

MR. COPELIN.—I am decidedly in favor of the proposed convention, and the forming of a Photographers' Association of America, and hope it will be pushed right along to a successful culmination. We have no time to waste. Let this society take right hold of the subject in earnest, and the thing is assured.

MR. PLATZ.—I suggest that the matter be referred to a committee, and that they be instructed to prepare a circular, and report at next meeting.

Motion regularly made, and the Chair appointed as such committee Messrs. Douglass, Copelin, and Hodges.

On motion, adjourned.

G. A. DOUGLASS,

Secretary.

PHOTOGRAPHIC SOCIETY OF PHILADELPHIA.—Stated meeting held Thursday evening, February 19th, 1880; the President in the chair.

On motion, it was decided to procure for the Society a set of Obernetter's pictures, similar to those exhibited at the last meeting.

Mr. Wallace read a paper on the production of lantern slides, which was listened to with interest, and led to considerable comment and discussion.

On motion, Mr. Wallace was tendered a vote of thanks for his valuable paper, and was requested to allow the same to be published in the *Philadelphia Photographer*.

In the discussion which followed, Mr. Bell said that in his experience wet plates could be made to produce a greater number of slides in a given time than any other mode of working.

Mr. Carbutt recommended a Marcy lantern as the best source of artificial light when slides were printed on dry plates.

Mr. Moran said that for some years he had used a solution of iodine in cyanide of potassium for removing any fog or stains from slides made by the wet method. A stock solution made of iodine ten grains, cyanide of potassium twenty grains, to one ounce of water, is kept at hand, and when required for use a few drops are diluted with water, and applied to the plate. The action is under perfect control, and in this respect is safer than the more usual plan of applying iodine first, followed by cyanide or hypo.

A book containing a large number of finely executed photographs of Scottish scenery, by J. Valentine, of Dundee, was sent by Mr. Edward L. Wilson for examination.

Mr. Carbutt exhibited a gelatin negative which had been exposed through the glass from the back, thus giving a reversed negative suitable for plate collographic purposes. He also called attention to a red, translucent paper which he used instead of ruby glass. This was shown to be easier to the eyes than ruby glass, and quite as effectual.

After the meeting was adjourned, Mr. Carbutt developed a number of his gelatin plates by the aid of his lantern and ruby paper, which had been exposed by Messrs. Corlies & Fox. A Globe lens was used, six-inch focus, smallest stop, and the exposures ranged from thirty to ninety seconds; time of day, between 3 and 5 P.M.

The members were much pleased with the ease and certainty with which these plates were developed. Mr. Carbutt said that he preferred to commence with a weak solution of ammonia and bromide, as much better control could be had by this means than by a stronger and more energetic developer.

A hearty and unanimous vote of thanks was given to Mr. Carbutt for the pleasure afforded by the exhibition.

D. ANSON PARTRIDGE,
Secretary, 1815 S. Fifth Street.

SOME PRACTICAL DETAILS OF SLIDE-MAKING.*

THE general increase of interest which has lately been observed in matters connected with lanterns and slides, will serve me as an excuse for making a few remarks upon the practical details of slide-making.

Let me begin by dividing this subject into two parts: the one, where enlargements or reductions from any size of negative are made in the camera by daylight; the other, and by far the preferable one, where contact prints are taken from the negative by artificial light on dry plates. My own practice has been confined almost exclusively to the former, from the fact that my negatives were almost all of the size $8\frac{1}{2} \times 6\frac{1}{2}$. To effect the reduction in size, which here of course became necessary, I used a simple apparatus, composed of two cameras placed face to face, on a long board, which was directed towards a south window covered with fine white tissue-paper, which thus received the full rays of the sun.

The ground-glass having been removed from its frame in one of the cameras, a negative was put in its place, and held there by a spring. This camera was then set upon the board so that the end carrying the negative came towards the brilliantly illuminated tissue-paper, and about eighteen inches distant from it. The other camera, having been mounted with an eleven-inch Dallmeyer rapid rectilinear lens, $F \frac{1}{17}$ stop, on a lengthening cone, was then set up on the other end of the board, and being moved far enough back to give an image of the right size, was accurately focussed, and then firmly clamped down to the board by means of a screw-clamp, so that no alteration in position was possible. The open space between the two cameras was then darkened by resting two wooden rods across, from one camera to the other, and throwing a large black velvet focussing-cloth over them, with the *pile side in*.

Where a south light cannot be had, the same apparatus in regard to board, cameras, etc., may be made to serve, with this difference, however—that the negative end of the

* Read before the Photographic Society of Philadelphia, February 19th, 1880.

board must be raised until nothing intervenes between the blue sky and the negative. The illumination as thus obtained direct from the sky is very uniform in quality, and pleasant to work by; and, indeed, the only objection to it is the awkward, angular position in which the whole apparatus has to stand. I can easily conceive it possible that the board might be kept horizontal, and a good reflector placed at the negative end. Those whose work-rooms face north may, perhaps, find this worth a trial.

So much for the apparatus; and now let us look for a moment at the chemical part of the subject. We might ask ourselves the question here: "Is a special character of negative desirable for the process to be used in making the slide?" I should answer this affirmatively, although I believe that moderately good results can be made from any negative that would print on albumenized paper; but my preference would be "soft," or even "thin," negatives; such as would have to be printed either in the shade or under two or three thicknesses of tissue-paper, *provided that a dry process be used in making the slide*. But if the wet-collodion process be adhered to for slide-making, I believe that nothing but a negative of good printing strength can be made to answer; and it gives me pleasure to say that I owe the knowledge of this fact to Mr. John Moran, who made this assertion in this room some years ago, and contrary to the ideas then generally held; but all my experience since that time has confirmed the truth of his statement in my mind. I will dismiss this part of the subject by suggesting that a very strong negative may be tried with a washed emulsion plate, brought up with acid silver before fixing.

Every one is familiar with the details of making a transparency by the wet process; so I shall only ask your attention to two points here—one, the albumen substratum, which I have found to work best when perfectly fresh, and containing no acetic acid or ammonia, as in Ackland's formula. Strength, 1-25. And if the tap-water be at all muddy, rinse off the plate with filtered water before applying the albumen.

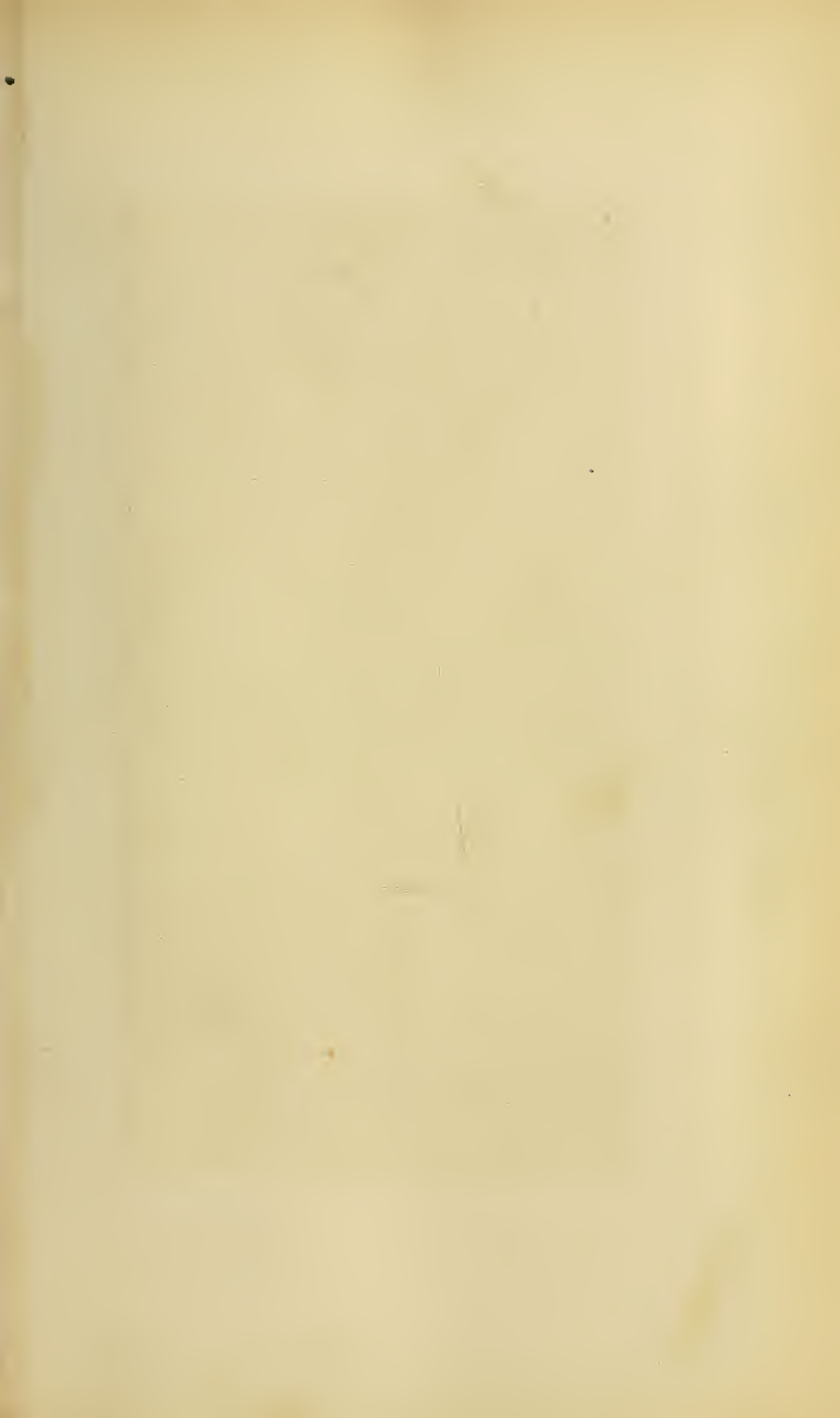
The other point referred to, and the one

where beginners in slide-making most usually fail, is *overexposure*. I wish to emphasize this particularly; for a slide that has once been overtimed (where the wet process is used) can never be made to appear clear and "plucky" upon the screen, but it will be found to retain a heavy, sooty quality, which is only aggravated by toning; and if attempts be made to "cut it down" with such reducers as iodine, followed by cyanide of potassium, the delicate detail is almost sure to give way, and leave a hard, blocky result. But where the image remains faint after fixing, a weak solution of chloride of gold, or better, chloride of palladium, will certainly improve it. Still, I have grown to dislike all of these toning agents, because when the varnish is applied, after they have been used, the strength becomes much reduced, and that, too, in the deep blacks, where it is most needed, a disagreeable, muddy thinness appearing instead. If more depth of tone be required, I should rather use acid pyro and silver, after fixing, taking care to allow for the increase of density which appears when the plate is dried.

But I much prefer to make slides upon dry plates, an albumen process, such as Hewitt's Fothergill being perhaps the best. Overtiming here is by no means so injurious as in the case of wet plates, and the image is of a far better color. In fact, by judicious management of exposure and development, almost any tone may be secured at will, *i.e.*, full time and quick development giving a warm tone, and the opposite blue or black.

Much time and labor may be saved by making these dry plates on large-sized glass, and cutting them down to the lantern size before exposure. If the plates be thus prepared at night, the operator is free to devote his entire attention during the day to exposure and development. The plates work with great uniformity, and the fatigue at the end of the day is by no means as great as if wet plates had been used, where a fresh one for every slide has to be prepared on the spot. I shall only say, in conclusion, that I work Mr. Hewitt's process in strict accordance with his formula.

ELLERSLIE WALLACE, JR.





F. GUTEKUNST

PHILADELPHIA.

Boston Public Library.
Very Truly
Adelaide Detchow

T H E

Philadelphia Photographer.

Vol. XVII.

APRIL, 1880.

No. 196.

Entered according to Act of Congress, in the year 1880,

By EDWARD L. WILSON,

In the office of the Librarian of Congress, at Washington, D. C.

OUR PICTURE.

THE beautiful examples of photography which embellish our current issue are from negatives made by the world-renowned photographer, Mr. F. Gutekunst, No. 712 Arch Street, Philadelphia; and we are happy in being able to procure such negatives for our use.

We mean to take no laurels from any who have heretofore provided us with so many excellent negatives during the more than sixteen years of our magazine life, when we say that it gives us special pleasure and satisfaction to be able to present our readers with an example of work from the studio of Mr. Gutekunst. He was our *alma mater* in this, our art beloved, and the *Philadelphia Photographer* was conceived in his establishment. He made the first negatives and prints for it. During 1861, 1862, and 1863, we labored under him, until, at the end of the latter year, the work of this magazine so grew upon us that we were obliged to leave our post there, and take up the work which has since so largely occupied us.

At that time, Mr. Gutekunst undoubtedly stood at the head of American portrait photography, *no one*—we believe it is safe to say—succeeding in producing work equal in all technical qualities to his. The result was a tremendous business for him; and ever since then he has maintained that position,

and his business has grown to an extent unparalleled by any other at home or abroad.

His patrons have been of the best class, and medals from exhibitions all over the world, and testimonials and honors from foreign courts have come to him from all sides.

His stock of negatives of renowned people is such, that if a great, good man dies, you are almost sure to see his portrait exhibited in Mr. Gutekunst's window in two or three days after the death is announced.

Of his success, the causes of it, and so on, we could say much, from our own knowledge, for the encouragement of young photographers; but it is hardly relevant to our present subject.

In 1861, while his work was the best plain photography made, it was crude enough, compared with the excellent models before you now. Mr. Gutekunst has ever kept alongside of improvement, and is just as careful and just as conscientious to-day about what appears with his name upon it, as he was twenty years ago or more. This care is *one* of the secrets of his great success.

We have printed our picture from *seven negatives*. No. 1. A three-quarter, standing, large profile figure, with the hat on; No. 2. The same figure, with a nearly front face; No. 3. The lady without hat, and a different dress, three-quarter, standing; No. 4. A

saucy, three-fourth length pose, etched negative, representing the character of Hebe in "Pinafore;" No. 5. A full-length figure, with rustic accessories; No. 6. A full-length figure in fancy dress, and attitude most charming, rose in hand. No. 7. Another full-length charming pose, etched negative, with hat on.

It is rarely we have seen seven negatives of one person so varied in pose and lighting, so uniformly excellent in every technical quality. They are all gems well worthy of most careful study and following. They are free from all unnaturalness and "gimlet" or "cork-screw" posing, and from all incongruousness. They are magnificent photographs, all.

The subject of our illustration, as you will have seen by her autograph underneath, is Miss Adelaide Detchon, a young lady to whose beauty of person is added a strong, sweet voice, remarkable histrionic power, and superior intellectual gifts. She was born near Youngstown, Ohio, and on both the paternal and maternal side traces to distinguished ancestry. Her father, H. Detchon, the first-born for fourteen generations, is the son of William Detchon and Hannah Jones, the latter being the first white child born in the State of Ohio, and the daughter of Edward Jones and Mary Price. William Detchon was the son of Oswald Detchon, whose father was General Detchon, the family having come to this country previous to the Revolution, from France, where they had held a high social position for many generations. Miss Detchon's mother—maiden name Davis—was the daughter of Aaron Davis, whose grandmother was a sister of General Stark, and Miss Davis' mother was Elvira C. Knox, a daughter of a brother of General Knox, a prominent figure in the Revolution, and at its close Secretary of War under the administration of President Washington.

In this country of republican principles, we rarely find people able to trace their lineage so many years back, in all the various lines, or combining so much of the heroic blood that carved out the independence of America.

Miss Detchon was reared in Cleveland, Ohio, and graduated at the high school in

that city with first honors. At the early age of sixteen, her elocutionary attainments were such that she was called upon to read in public for the benefit of the Young Men's Christian Association, and acquitted herself so well that many demands were subsequently made upon her for public and private readings and recitations, in all of which she was so successful that she was induced to extend the sphere of her ambition, and appear upon the stage. Carefully nurtured as she had been, of good family and position, and early imbued with strong religious views—which have been strengthened and intensified by the lapse of time—such a course seemed not suited to her inclinations; but, prompted by filial love, and an independent spirit, which did her credit, she finally decided upon the step, conscious of her own high purpose in endeavoring to make happy the declining years of her parents by providing them with the comforts to which they had been accustomed, and of which the mutations of life had, in a measure, deprived them.

Independent of the unselfish motives which actuated her, the decision was a wise one, for the prominent position to which she aspires as a reader and elocutionist, cannot be attained without this absolutely necessary dramatic training. So held Charlotte Cushman, the greatest tragedienne this continent has known, who attributed the distinction she acquired as a reader to the experience and knowledge gained upon the stage.

Though possessed of influential friends, whose aid could have been instrumental in at once placing her upon the boards as a "star," Miss Detchon disdained to take advantage of any adventitious aids, and wisely determined to commence at the beginning, and rise by her own merit. With this end in view, she carefully studied elocution under the best masters of Philadelphia and Boston, and her advancement was so rapid that in a short time President Shoemaker, of the National School of Elocution and Oratory, paid her the following high tribute: "She is not a stereotyped reader, but brings her individuality so thoroughly into her art that art is at the same time nature. She is faithful to sentiment and passion, and combines, with almost marvelous vocal power,

great dramatic force in face and movement."

Her first venture was with the Ellsler Dramatic Company of Cleveland, taking the character of the Witch in "Fanchon," and subsequently, as Prince Arthur in "King John," supporting F. C. Bangs, who starred in the South under John T. Ford's management. Her impersonations in both instances were marked by power and originality, and made her a pronounced favorite at once. Last season, she made one of the most charming of the host of Hebes that overran the country during the Pinaforic rage; but such a character gave no scope for her fine capabilities.

Having this year been engaged by Managers Tomkins & Hill (Boston Theatre), she has been given an opportunity at the Brooklyn Park Theatre in a leading character,—that of Agnes in "Wives,"—and has met with success so decided and flattering that a brilliant future is assured. Referring to this engagement, the New York *Mirror* says: "The character could not have been better sustained, or an artist have made a more instant bound into public favor. In the second act, Miss Detchon introduces two readings—Bryant's *Robert of Lincoln*, and the *Bugle Song*, from Tennyson's *Princess*, which are so effectively rendered as to carry her hearers fairly by storm, and evoke as enthusiastic recall as a delighted audience ever demanded."

We are thus explicit as to the history and work of our fair subject, first, because of our gratitude to her for affording us the means of receiving and giving so much pleasure and instruction as her pictures will afford to those devoted to one of the sister arts; and secondly, because we admire the spirit she evinces in working out her own fame for so glorious an object. She will have success wherever she goes—*deserved* success.

Our prints were made at our own rooms, on Mr. G. Gennert's importation of S. & M. Extra Brilliant Dresden Paper.

The printing of this style of vignette picture, by the use of Waymouth's Vignette Papers, was fully described in our last issue. No effects can be more soft and beautiful.

NOTES AND PRACTICAL SUGGESTIONS.

BY A. M. DE SILVA.

(Continued from page 47.)

WHEN I undertook to write these "Notes and Practical Suggestions," it was my intention to try to be of some service (however slight), not only to those who work carefully, to those who have had and still have an opportunity of study and research, and an inclination to aim higher, but also, and more especially, to those far away from all opportunities other than can be found in the journals. Those, again, whose inclination, perhaps, leads them to look not more deeply than that which brings "grist to the mill"—a very necessary commodity.

Opposed as I am to puffs and puffery, I see no reason why true work should not be commended.

"Closet speculations," as I will term them, are perhaps the most dangerous things which can be thrust forth on far-off and credulous readers. Of these we have ever and anon a surfeit. They are, of all things, most difficult to detect. No doubt many are given in good faith, but there is a good deal of "hap-hazard" to be gone through before we arrive at the realization of our hopes. One will tell you to a centigramme how much silver he dissolved in an equally certain quantity of alcohol; that it was heated, etc.; but he cannot for the life of him tell you short of an almost unheard-of experiment (for an ordinary photographer) whether every atom of that silver nitrate was "got in." By the addition of certain bromides, chlorides, and iodides (one or more combined), he has obtained *about* that which was necessary to the successful working of his process. Luckily for photographers, the "chemistry of photography" is good natured, and seems to admit of a "rule of thumb," but in order to appreciate this, we must always be on the lookout.

Of those who have read the formula given by Mr. B. J. Edwards for a new intensifier, how many have *tried* it? To the majority of readers it must have appeared, and has by them been pronounced, a "strange mixture." Every photographer is familiar with the old bichloride of mercury inten-

sifier, and many with the iodide of mercury, with an excess of bichloride of mercury.

Strange a mixture as it may appear, it works most beautifully on ordinary bromo-iodide bath plates; and I am told by a friend of mine, experimenting with Carbutt's gelatin plates, that it answers admirably on those also.

I first experimented strictly according to the rule laid down by Mr. Edwards; afterwards (purposely) carelessly. To about eight ounces of the ordinary solution of bichloride of mercury, to which had been added a solution of iodide of potassium—the mercury being in excess—I added about forty grains of hyposulphite of soda dissolved in one ounce of water, the result being a milky appearance. I neither added to nor filtered, but poured this solution on to the fixed and well-washed negative—a line drawing.

After applying this until the film was bleached white, washing well, of course, I applied a weak solution of hydrosulphuret of ammonia in water (about 1 to 16), until the negative was sufficiently intense. (If this, or a solution of aqua ammonia, which will answer, be applied too strong, the film will be covered with innumerable pinholes.) The finest lines were so clean that when the silvered paper was placed in contact in a pressure-frame, it resembled a tile.

Again, as frequently happens, an over-exposed ambrotype or tintype, lacking in contrast, has to be copied, or worse, enlarged; by the application of this new intensifier, the darker parts are cleaned up, and the lighter ones intensified, producing the most satisfactory results. In this case the application of the ammonia is omitted.

I have written at some length on this subject simply because I believe it is most valuable and easily applied, and certainly once tried will be adhered to, even though you work by "rule of thumb."

"While there's life there's hope." Every one must be wishing for a convention of the followers of our art-science. No sooner is it advocated than new life seems to spring up amongst us: more space is devoted to art culture in the journals; the old followers of photography will come forth from their hiding-places, and teach the "new ideas" their experience.

If we pull steadily together, this convention will be an accomplished fact, benefiting every one of us in intelligence, renewing our courage, placing us prominently before the public, thereby giving us a status, and a grand advertisement to boot.

April bringeth joy to the landscape photographer. If the "traps" have not already been overhauled, it is high time they were put into order, for we have but three months before the summer heats seriously interfere with outdoor work.

As everybody is interested, more or less, with everything new, I am enabled to note that, through the kindness of Messrs. Benjamin French & Co., I have had an opportunity of trying one of the latest lenses by Voigtlander & Sons, a doublet, which they style the "Wide-angle Euryscope."

The lenses are of small diameter; it works with a large stop, about one-fourteenth of the focus, and has a remarkably flat field, consequently it may be laid down as a comparatively rapid-working objective; the definition is most perfect.

The lens I had for trial, $10\frac{1}{2}$ inches in equivalent focus, would cover, with largest stop, a plate 8 x 10 inches; by reducing the diaphragm a larger field was covered; with the smallest stop, a plate 11 x 14 inches. For copying it is excellent, a newspaper being reproduced, sharp and clean, 13 x 16 inches on 14 x 17 plate.

I have since learned that an improvement has been made on the original rapid Eury-scope, the particulars of which I am not in a position to report, but shall endeavor to do so in a future number.

I noticed that the new Voigtlander wide angle *just would not* fit into the Ross flange; that the thread of the Ross lens is a little too coarse to fit the Dallmeyer of nearly similar size, and Morrison's and Usener's, and that the Steinheil and Darlot's slightly vary also. Why cannot the opticians put their heads together amicably, and save photographers carrying a host of fronts; and if not, why cannot photographers "get their backs up" (like the microscopists), and *insist* on some uniformity of the flanges of lens mounts?

Solar Negatives.—By slightly modifying the positive formula for collodion, making it

one grain of cadmium bromide, and two and a half grains of ammonium iodide, and four grains cotton to half an ounce each of alcohol and ether, very excellent negatives, intended for subsequent enlargement in the solar camera, can be made, of course, using a stronger developer, and omitting the application of the sulphuret.

A friend of mine, the other day, gave me a good point (which I think worth noting) in the use of sulphuret of potassium; it was to *use it hot*; and it is really surprising what a wonderful printing power can be obtained by this method when occasion requires it.

Another New Lens.—This time, a wide-angle, working with large aperture, from the Messrs. Voigtlander, which, through the kindness of Messrs. Benjamin French & Co., I have an opportunity of examining. They write: "Test it *thoroughly*, it being the first of a new series." This I shall not fail to do, and give my confreres the benefit in my next "Notes."

Two Notes for the Stock-dealers.—In packing albumenized paper, where it is rolled up, many a "prayer" for the repose of the soul of the packer would be saved to the luckless silverer,—whose sheet, in consequence, insists on plunging *into* the silver solution,—were the paper *rolled albumen side out*, instead of in the customary fashion.

The iron studio camera-stands invariably made with three casters, would not wriggle or shake half so much were one of the feet set at the back of the stand, and its usually badly-fitting caster substituted by a peg, a handle being placed at the back to lift the stand while rolling it about. And would it not be better to have the socket of the casters drilled clean and tapering, instead of using a "core" when the legs are cast?

(To be continued.)

ABOUT OUR BACKGROUNDS.

BY FRANK ROBBINS.

THE illustration for December, 1879, with "Accessories Thrown In," recalls my own experience in the background line; and I will give it in a few words, that others may profit by an experience that cost me hard cash, and completely revolutionized my ideas in regard to home-made backgrounds.

Some years ago, I had a window background constructed by a carpenter, one side to represent an interior, and the other an exterior view, with a movable sash. It cost a great deal of money, and, when completed, was only a cumbersome wooden affair at best; and every picture made with it seemed to partake of its rigid, frigid straight lines and sharp angles.

Now, with the present styles of full-length portraiture, the backgrounds and accessories form a very important part of our work, becoming, as they do, a part and parcel of every picture we deliver to our patrons. It is of vital importance, therefore, that they should be artistic.

The public are not judges of these matters, and happily so for us. In criticising our work, they have the general impression that the work is wholly ours, background and all. How important it is, then, that we should use the most *artistic* backgrounds that can be produced, and thus avail ourselves of the superior taste and skill of the artist who has devoted years of study to this one department; thus giving our work an artistic tone, that cannot be attained with the badly executed backgrounds so much in use, because of their cheapness.

A really fine background, like an artistic picture of any other kind, has an intrinsic value at any and all times. It loses nothing by careful-use, and after doing faithful service in elevating and improving the general tone of our work, can be readily sold to some brother photographer for nearly its original cost, to make room for another of later design. This frequent change gives our business a healthy and enterprising air, that is not wholly lost on an observing public.

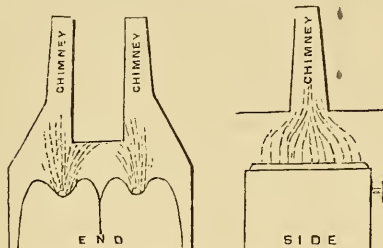
In conclusion, then, if we would style ourselves photographic *artists*, let us employ the *artist* to make our backgrounds; for if we employ the *carpenter* for this important work, we shall be called only photographic carpenters.

USE WAYMOUTH'S VIGNETTE PAPERS for all plain and fancy vignette printing. They excel all other devices.

PLATT'S HEATING LAMPS.

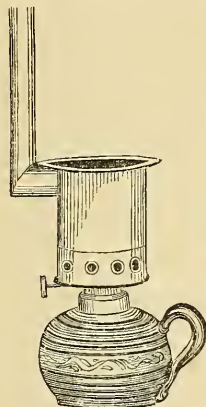
BY S. L. PLATT.

FIRST, my lamp for heating the burnisher; I give you an end and a side view.



It is made of tin, with double flame, and a space between for the burnishing tool. It explains itself further.

My chimney attachment for heating purposes, is also made plain by the cut.



I use any size of lamp to suit my purposes, and make the attachments of sheet-iron. One for heating the burnisher can be constructed in the same way, by using two four-inch wicks, both running lengthwise of the burnishing tool.

I find both of these of great convenience and use to me at all times of the year.

MARENGO, ILL., January 30th, 1880.

LIFE INSURANCE.*

WHY cannot we have a "Photographers' Relief Association," and insure ourselves, as scores of other fraternities do? I think we could easily get up an association of 1000, or more, in the course of a year; so that for an entrance fee of, perhaps, \$5.00, and a payment of \$1.10 at each death, we could place in the hands of each member's wife \$1000 at his decease; precisely what she would get

* Our correspondent has probably overlooked Mrs. Lockwood's papers on this subject.—ED. P. P.

would be \$1.00 from each member of the association at the time of his decease.

If 100 will send me their names I will start it as secretary, at the end of six months make a semi-annual statement, of all receipts, expenses, deaths, etc., and then should we ever have another National Convention we could choose directors, and such other officers as should be deemed necessary.

As to my being secretary, I would just as soon any one else would have the position, if the fraternity would be better pleased; but, at all events, let us have the association.

FORESTER CLARK.

PITTSFIELD, MASS.

HOW BUSINESS IS, AND WHAT OF IT.

RESPONSES TO OUR CIRCULAR LETTER.

(Continued from page 73.)

FROM BACHRACH & BROTHER, MARYLAND.

1. Business this fall is fair, and, when the weather is favorable, appears to be improving over last year.

2. The prospects for the coming season appear to be good *for good work*, and there appears to be a better disposition to order large work. *Carte-de-visite* orders are sensibly decreasing, and cabinet orders increasing, with very little demand on the part of our patrons (which are mostly of the middle class), for the long panel pictures, and such odd sizes in general.

3. The enclosed circular will explain our position. The system of unlimited resitting, formerly adopted by some, and vehemently advocated, we would never submit to, and we have not had as much trouble as those who first adopted it, who are now bitterly complaining of the system. The number of sittings we give is governed by the size of the order and its amount, and we will not be imposed on by parties wishing to try experiments for a very small order. A little firmness and dignity, and explanation of the subject to our patrons, we find pays.

4. We secure pay in advance from all strangers, or those we do not know, and it is politely asked of all to pay a part of the order, but not insisted on, except with some *whom we know too well*.

5. We find it pays to improve the quality of our work to the utmost, even at higher prices, and we have made up our minds to spend all our surplus in *facilities*, and but little in *show*.

6. Our efforts to please are appreciated by all our patrons, except a certain supercilious hypercritical class, whose object mainly appears to be to give as much trouble for as little money as possible. We generally "sit down" on them politely but effectually. They are of a class who try to ride over all with whom they deal in a haughty manner. They generally leave our place crushed with a freezing politeness. We are usually on familiar and genial terms with our patrons, and we find it makes them easier. When people of evident judgment complain of the quality of the work, and we can discover any means of doing it better, or it is not *fully* up to that *which we exhibit*, we do it over cheerfully. Sometimes when we find it impossible to please, and desire to avoid trouble with unreasonable people, we return the money, if paid, and close all relations with them. This has occurred in extremely few instances, and then only to avoid compromising our dignity. We find it pays better than to be servile and artificially polite, which is despised by those whose patronage is of any value. A knowledge of human nature, and how to deal with different dispositions, is of value in this connection.

7. Low-priced competition is damaging only when the pernicious practice is followed by yourself. Our business is different from that of shopkeepers, every one of whom can buy the same goods; but every photographer of any merit, has an individuality in his work which his patrons like, and which they will not abandon for any reasonable difference in price, if they are treated right. When low-priced competition also means inferior work, it is generally a benefit to the one who makes good work. We speak from having experienced *low-price competition* for years, but have never changed our prices on that account.

8. We usually make more than one sitting, when the order justifies it, and allow a choice.

9. The public taste has improved, and is more exacting as to quality, and it demands

work measured by the standard of Sarony's, and other work constantly exhibited, of professional people, etc.

10. With us the cabinet stands first in popularity; 4-4 and 8 x 10 next, and 11 x 14 vignette heads next. *Cartes-de-visite* have lost ground.

11. Pictures with fancy backgrounds and accessories are mostly demanded for children. Cultured people are now demanding absence of accessories on account mainly of Sarony's example in most sittings of private customers. Pictures of masses of furniture *with a figure among them*, are no longer popular, and we have always depreciated them to our patrons.

12. We consider *judicious* retouching a *real* improvement. *Only full timed and finely manipulated negatives of very good subjects*, are fit to be printed plain, conditions not possible under most circumstances. When such conditions are to be had, however, the picture is more perfect in an artistic sense. Pimples, freckles, scars, deep wrinkles, and hollow cheeks, are usually stronger in a photograph than in nature; and retouching is, therefore, a great aid, and especially with under-timed work, weak light, nervous people, etc. We consider burnishing, in many cases, an improvement, on account of the transparency of shadows imparted, but the gloss is unartistic and objectionable.

13. We have not reduced prices in the last two years.

FROM J. HANSON JONES, ILLINOIS.

In answer to your questions I would say:

1. Improved since harvest.
2. Not very encouraging.
3. Yes, when requested.
4. Very seldom.
5. Not much encouragement.
6. I think they are.
7. Yes. Yes.
8. I allow my customers to sit till they are satisfied.
9. Public taste has improved, and people are better judges of good work.
10. Card photographs and gems 4 x 4 and 8 x 10.
11. Yes, it keeps me busy to invent accessories and positions.

12. I don't know.

13. Yes; low-priced neighbors are making card photographs for \$1, and cabinets for \$2 a dozen. I am still getting \$2 for cards and \$3 for cabinets, but I don't know how long I can stand the pressure.

FROM J. PERRY ELLIOTT, INDIANA.

1. Business is dull, but there are signs of improvement.

2. Prospects for the coming season are not very encouraging, for reasons which will appear in answer to question No. 7.

3. I do not show proofs, but warrant my work good.

4. For sixteen years it has been my rule to secure the pay when the sitting or order is made; hence I have no trouble collecting bad debts, and, besides, I think customers are more apt to be pleased with their photographs when they call for them, than if they were not paid for, and, besides, they call for them much more promptly.

5 and 6 may be answered in one word. Yes.

7. Might also be answered in the same way; but I will say that low-priced competition is the bane of the business in this city; for, in addition to the half dozen notoriously cheap (\$1 a dozen) galleries, one of the leading photographers—one, too, who boasted in your worthy magazine a few years ago about his high prices—has, within the last year, been advertising his photographs (cartes) at \$1.50 per dozen.

8. I make but one negative.

9. Yes. No. Public taste has improved, and, I think, for that reason, is less "exact" and more easily satisfied with artistic results.

10. Cartes and cabinets.

11. Not to any considerable extent. Plain backgrounds are the standbys.

12. I think *limited* retouching a real improvement in our art, and there has been great improvement in printing; but as for burnishing, it is no improvement, and I imagine it detracts largely from the keeping qualities of the photograph.

13. I have not, but rather the reverse.

I pretend not to be authority on these matters, but have answered as they appear to me.

FROM E. R. CURTISS, WISCONSIN.

With pleasure I will do as you desire, to the best of my ability.

1. Six years ago, I worked up a business far above my expectations, and have been able to maintain it by studiously keeping well posted through the mediums (the *Philadelphia Photographer* publications and other good works). Do not look for any improvement in business, without something very *stunning* should make its appearance.

2. The prospects are not quite as good as formerly, as the crops were a partial failure in this immediate vicinity, and we have to rely on the *grangers* to a certain extent.

3. I prefer to show proofs, but never mail them, as it is hard to make people understand that they are not finished pictures, without you have them before you to explain that in finishing it removes all defects, etc. By showing proofs in gallery, I have no trouble. Do not do any preliminary retouching before showing proofs, but think it might pay if I had the extra help. I never tone or fix proofs.

4. As a general thing, I do. Of course, I have to use common sense and judgment as to customers. Always from strangers.

5. I am encouraged to make efforts to improve, as I know that it pays; and as soon as an operator thinks he knows it all, he is very apt to take a back seat.

6. I think they are, as my customers patronize anything new that is worthy. As an illustration, in the spring, I had a local view made into a background; put in a swing, boats, etc. I was kept very busy, as visitors from all points patronized it liberally. There are two galleries here that make photographs at most any price. I do not think that it injures my business any, but has a tendency to stimulate people to look for better work.

8. I use double plates, and make two sittings on each; and if I see where a sitting can be improved, I suggest it of my own accord.

9. Public taste has constantly improved, and perhaps they are more exacting; but, with the increased facilities at hand, we do not experience the difficulty in pleasing that we did in years past.

10. Cabinets and cards; had quite a run

on Elton's panels, but they came to grief on account of the difficulty in procuring mats and frames suitable.

11. I use some fancy backgrounds and accessories, but the rule is bust or one-half figure.

12. I think that retouching and burnishing have created a permanent demand for photographs in a ratio of 3 to 1; and I regard it a great improvement financially, as well as artistically.

13. I have reduced cabinets from \$9 per dozen to \$6, and find I am making about eight cabinets where I made one before.

FROM W. S. WHITE, MICHIGAN.

Business duties have prevented my giving attention to your "Circular Letter to Photographers" until this rather late day, but as I have seen nothing in the published answers thereto from this section, I conclude to pen a few lines in regard to the important matters—to the profession—covered by such circular.

1. Business with me is good, and is improving. At no time since 1870 has my business manifested so many encouraging features as at the present time, and the outlook for the future is very promising.

3. Yes, I "show proof," for the reason, among others that I may ascertain, as nearly as possible, my patrons' tastes and wishes, and be thereby the better able to satisfy them. I spare no pains to please my customers, and believe that it *pays*.

4. Pay in advance I do not always insist upon. A large part of my business is with "old customers," with whom such a rule would be superfluous, and with the other class I act according to physiognomical impressions, and other circumstances surrounding each particular case, as it seems to me every successful business man must in dealing with his fellows. Instead of losing by such a course, I am confident that I make money thereby. It never seemed to me just the thing for a photographer, or any other man, to adopt an inflexible rule of business that implies that all the world but himself were unmitigated cheats and frauds, so I do not do it.

5. As every photographer must, if he would succeed in his profession, I am making

"continual efforts to improve the quality of my pictures," and as a matter of course such efforts are appreciated.

7. Low-priced competition has increased to some extent, but I do not think that good work has suffered any in consequence.

8. I make more than one sitting very frequently, sometimes to please myself, and sometimes on the customer's account; and when doing so I allow a choice. I do not understand how the best results can be reached in any other way many times.

9. The public taste now, as it always has been during the twenty years that I have been in business, is much better suited with good pictures than poor ones. I do not see any great change in this respect. I think, however, that very many people are better able to judge between the good and the bad than formerly, and therefore more willing to pay the additional price justly due the good.

10. *Cartes-de-visite* and cabinets are the most popular sizes, although my work covers a very wide range, and calls for many life-size portraits finished in oil, india ink, and water colors.

11. Pictures with fancy backgrounds and accessories are frequently demanded, and it pays well to keep well up with the improved facilities for producing them; but much the larger part of my work is done upon a plain background, with few accessories, and finished accordingly.

12. Many of the so-called improvements have, in my opinion, been real improvements. I do not see how any progressive photographer, who is at all imbued with the "spirit of art," can deny that retouching, burnishing, and fancy printing are all of real benefit when rightly used, and when pictures are spoiled by the abuse of one or more of them, the fault should be charged in another quarter, where it more properly belongs.

13. I have not reduced prices within two years, and know of no good reason why I should have done so.

Mindful of the benefits bestowed upon the profession by the *Philadelphia Photographer*, and wishing it a long career of continued usefulness and prosperity, I send this most cheerfully.

FROM J. WEALTHY, IOWA.

Your card in the November number is *the* thing, and compliance with your request, in part or whole, from all, would soon bring light, and show us where we stand; a condition beneficial to all. I operate a small gallery among a scanty flock, of medium to poor art culture (here you may want to put in a little advice), but your questions seem to apply to small fish as well as large (if I may be allowed to use the expression), hence I reply:

1. Business is improving, beyond a doubt.
2. Prophetically answered by first.
3. I inform myself, as near as possible, what a sitter wants; this is essential. After that I am to be judge and jury. This is not told in so many words, but the import is impressed in a mild way, which a little tact will accomplish. I take the negative (a card, for instance), retake, *if I find necessary*; the sitter pays fifty cents, and departs with the understanding that he is to have one finished picture; if the latter is satisfactory, the amount paid is applied on the price per dozen, or otherwise, of the future order; if not satisfactory, the sitter is invited to call and resit on precisely the same conditions; this, with a little explanation about trouble, time, material, etc., generally satisfies.
7. Increased during hard times; no real damage.
8. Never without pay.
9. Yes.
10. Cards.
11. Demand on the decline.
12. Considered so by patrons.
13. Have had strictly one price for all, for several years.

FROM M. P. BROWN, MICHIGAN.

Your circular letter in the *Philadelphia Photographer* is a good one, and if responded to, will cause us all to be benefited very much by such an exchange of ideas.

I am located in a country village, and my patronage is principally from the farmers, and as this has been a good season for them, I expect a corresponding increase in business. My answers then would be as follows:

1. Business is fair; it is improving.

2. I think prospects are better for the coming winter than they have been since the panic.

3. I show proofs, but wish I could avoid it. In some cases it may be to our interest to do so, but usually customers will take advantage of our anxiety to suit, and often abuse the privilege. My plan has been to show an untuned print before retouching, and, as much as possible, keep them in the gallery.

4. Usually I get part payment, at least, when the sitting is made.

5. Yes; when I chance to see a fine photograph made by some co-worker, I feel that this is a progressive age, and we must be up and doing, or we shall find ourselves in the background.

6. Not by the majority. Brother Worden hits this point in the November *Philadelphia Photographer*, on what the N. P. A. ought to do for us.

7. I think not. There are many people in all communities who will take quantity instead of quality, and they are generally the customers who want to dictate all the way through. Let them go for their cheap work, and give us more time to devote to those who are willing to pay.

8. Yes; always, if possible.

9. Yes; more exacting, but hardly willing to pay for extra outlays to produce better work.

10. Card size and 8 x 10 vignettes.

11. More than usual. Not as much as in larger cities, however. Our subjects are not as well suited to this style. It often occurs that we are called upon to make a negative for a sitter who, perhaps, is having photographs for the first time, and others who have not had any for ten or fifteen years. I conclude they are not sufficiently posted in styles to be taken before a *Seavey*.

12. I think the public consider them as such, or at least they pay for it when obliged to, rather than take such as were made before these changes were introduced.

13. No, sir. I think we get little enough, and would be glad to see a general advance all along the line; and with Mr. Worden, I will agree and say, if we can have a Convention that will make us a unit, working together for the common good of all, and

defending us from ourselves, and the resittings, etc., of a too exacting public, let us have it. It would be cheap at any cost.

FROM L. T. BUTTERFIELD, WISCONSIN.

In reply to your circular letter I would say:

1. Business is "booming," and is improving.
2. The prospects for the coming season are good.
3. I show proofs when they ask for them, but if they do not say anything about proofs I do not. Sometimes I show the negative.
4. I secure pay in advance where the pictures are to be sent away, but if they call for them I do not insist on prepayment.
5. I am encouraged to do the best I can.
6. Sometimes my efforts to please are appreciated, and sometimes not.
7. I have some low-priced competition, but I do not think it hurts me any. Most people are willing to pay a good price for good work.
8. I make two impressions on one plate, and if I do not get a negative that suits me the first time trying, I make resittings until I think I have done the best I can.
9. Yes.
10. *Cartes-de-visite* and cabinets are the principal sizes with me, although I make a good many 8 x 10.
11. I could use more fancy backgrounds and accessories if I had them, and shall use more as soon as I feel able to get them.
12. I think the so-called improvements are real improvements.
13. I have not reduced prices, and do not intend to.

FROM H. W. IMMKE, ILLINOIS.

Inclosed find P. O. order for \$5.00 as subscription for the *Philadelphia Photographer*.

In reply to your circular letter I will make the following few remarks:

Business is better than it has been for the past three years, and I think the prospects are that it will continue to improve, as the times are brightening up.

I used to show proofs altogether, but now only when requested. After taking a negative, I show it to the sitter; if the position, arrangement of dress, etc., are satisfactory, the pictures will usually be satisfactory

when finished, providing a perfect negative is obtained before the sitter leaves.

If possible, I secure pay, or at least part pay in advance, unless I know the customer to be reliable.

An effort to please is appreciated by most patrons, especially if they know we try to please them, and aim to turn out none but first-class work.

Pictures with fancy backgrounds and accessories are more in demand than formerly, and anything new in that direction adds to the business.

I think judicious retouching a great improvement; also the burnishing of photographs.

I am always ready to take up any real improvement, providing I think it will justify me financially, as I like to be sure of my bread and butter.

Some eighteen months ago I was struck by "lightning" to the extent of \$5.00 for a six months' permit. I have since concluded to use my own brains, and save my dollars. I had no trouble working the process, but find I can do better work by working my own way, and work just as quick. I have nothing to say against the process, as others are working it successfully as they claim, but I was not able to get the best results with it.

I wish success to the *Philadelphia Photographer*, and to you a happy New Year.

FROM J. PAUL MARTIN, IOWA.

I enclose draft for the *Philadelphia Photographer* and for *Mosaics* for 1880. I enclose a few *cartes* also, to show you my work. As I grow older in our beautiful art, I think I am improving.

You asked some time ago how I liked the leaflet, *The Photographer to his Patrons*. I could not then inform you, but I can now, after six months' use of them. I would say I have advertised in every way known to the advertising public, but your leaflets are ahead of everything in the way of advertising. Ladies ask for them, and always come dressed suitably to be photographed, in the right colors, etc.

In answer to your circular letter I would say:

1. Business does not improve here.

2. I do not think the big boom will reach us.

3. Yes; I show proofs, untuned, the day after sitting.

4. I always secure pay in advance when it is possible to do it.

5. Yes; my love for the art encourages me to make every effort to improve the quality of my work.

6. My patrons do appreciate my efforts to please them.

7. Low-priced competition has not increased, nor done any damage; it has done good in our town.

8. Not generally. I endeavor to make one negative, and show one proof. I find in showing proofs from two negatives my patrons do not know which one to order from, and they wish to take half and half if you do not charge extra, but I charge fifty cents extra for half and half.

9. It has improved in whims and fancies, and is too exacting. I think photographers are at fault for it, in giving way too much to the whims and fancies of their patrons.

10. The most popular sizes with me are *cartes* and cabinets, plain or vignettes.

11. I have not much use for fancy backgrounds, as most all call for large heads.

12. Retouching and burnishing, I think, are big improvements, and I do not think the public would have photographs now without those improvements.

13. One year ago we reduced our prices half way, to meet our cheap brother photographer, who was taking *cartes* at \$2 per dozen, and ferrotypes four for fifty cents. He still lives, and I think he is doing good, for every one who gets one dose returns nevermore. He works a "south light," and he understands working it, too—over the left.

Please send a journal that has a good photograph, as I think a good deal of the journal, and the photographs, too.

Clemons' bluing process and his paper is just "boss," and I think all photographers should give it a trial, if they want to improve their tones and the finish of their pictures.

FROM H. J. ELLIOTT, IOWA.

Thinking to aid you in your good work,

I have got a new subscriber for you, besides selling him three of your books. I think if one-half of the photographers would send you a draft for \$13.60, your journal would be better than ever, if that is possible.

As I have not seen any Iowa answers to your questions, I will give mine.

1. Business is good, and is improving. My profits were nearly double what they were in 1878.

2. I think the prospects for the coming season were never better for my business.

3. I seldom show proofs unless requested to do so, but never the day the negative is made. I have them to come in to see the proof the next day, and they generally come prepared to like them.

4. I fill out the due bill like the one I send, and hand it to the customer; it nearly always brings the cash.

5. Yes; I think I feel encouraged to try to improve my work, or at least I am trying to.

6. My efforts to please my patrons I am certain are appreciated.

7. Low-priced competition has increased in towns around here, but does me no damage. They are a real benefit, as people can appreciate good work after trying them.

8. I always make a double negative, sometimes two, and give my sitter the choice. If they select the poorest, I finish the one that suits me best, and it generally gives satisfaction.

9. Public taste has improved very much in the last few years, and expects as good pictures as "her cousin had taken East."

10. Cards and cabinets are the most popular.

11. To keep up with the public demand I shall have to get some more backgrounds and accessories.

12. I think retouching, burnishing, and fancy printing are improvements, as it would be almost impossible to get good pictures from some of our subjects out West without them.

13. I have not reduced prices. My opposition, in the big city near, were making pictures for almost nothing. I kept on at the same old prices, doing well. Last month they got up a price-list; we all signed to work at the same rates.

FROM F. M. SPENCER, PENNA.

Your circular letter of November 1st suggests topics for exchange of opinions worthy of careful consideration at this time of returning prosperity. Photography is probably one of the most, if not the most, sensitive of industries to financial depression, so that the past five or six years have fallen with particular severity upon our profession.

Luxuries more costly, and of less real value, that have had the support of fashion's inexorable demand, have fared much better than photography, which seems to be distinguished as the want that can best be put off, and for the same reason we shall have to wait longest "for the tide to come in," and bear us to prosperity again; and the revival will be soonest felt in the large cities and manufacturing centres, and last in the rural towns, of whose fortunes your correspondent has his share.

Notwithstanding the misfortune of location, I can see some improvement in the past year, and I expect to do a larger business in the year to come.

Low-priced competition has not increased in this locality, and much that has existed has met its richly deserved reward. I do not regard such competition as a serious evil in the long run. The contrasts in productions help to illuminate the vision of the masses, and show them that excellence is worth, and can command its price.

In April, 1877, I advanced my prices on all sizes on the basis of \$1 per dozen advance on *cartes-de-visite*, and to meet the needs or demands of all classes (I have no established competition nearer than ten miles), I make two grades of work on the basis of \$1 more per dozen for cards for the first grade than for the second grade.

I make at least two exposures on a 4-4 plate for the first grade of card work, and always show proofs, and allow resittings as often as required, making my customer feel that I am particularly anxious to please him. For the second grade of work I make one or two exposures on a 4½ by 6½ plate, show proofs, and retouch the negative chosen moderately; print plain or vignette, at my own discretion, and mount on cheaper

mounts than those used for the first grade. I pursue much the same course for larger sizes.

I prefer showing toned proofs when I can, even at the expense of mailing them, as they are more apt to give satisfaction at first than an untuned proof. The paper rejected for finished work is used to print the proofs, so that the loss in paper is little. I do not retouch the negative at all for proofs, but strive to make it satisfactory without the use of the pencil, and at the first sitting, and encourage the customer to trust me for the finish. No matter how many proofs I may show, I only retouch one face, without an extra charge of at least fifty cents for each additional face.

Although this system would seem to encourage resittings or experimental sittings, my experience is that it works the opposite. I think there is a sense of reciprocity to fair and courteous dealing that prevents the customer, as a rule, from making unnecessary trouble and expense. Students make the most fractious customers. They want their pictures to suit everybody, and often fall victims to a narrow class of critics who can approve of nothing that is satisfactory to others for fear their judgment will not be esteemed unimpeachable.

More than ninety per cent. of adult customers choose the highest grade of work, so that the second grade of work is almost entirely confined to subjects that require very little retouching of the negative. The plan works quite to my satisfaction.

I would add that portraits, for the sake of the portrait, form the bulk of my work, though there is a growing demand for fancy full-length work among the ladies, stimulated, no doubt, by better times and the dressmaker. I suppose we ought to be glad to share with the merchant and dressmaker in the profit of fashion's fancy (and follies, too).

I find in the benefit to me in æsthetic culture, ample reward for continual effort to improve my work, and I believe it is in some degree appreciated by my customers. He who thinks the public taste has not materially improved must go back to doing the style of work he did twelve years ago, and consult his cash account when the next

quarter's rent comes due, or take a sharp focus on his competitor of those days, when the new-born *Philadelphia Photographer* sounded a general advance along the whole line; who lay stuck fast in the old rut until covered with the dust and decay from sight, or has long ago had his business settled by the sheriff.

There can be no doubt that photography has improved in finish in the last decade, and I do not see how the fact of substantial improvement in the æsthetic sense can be questioned. If burnishing had no advantage other than gloss, it would be of doubtful advantage, but it does bring out transparency of shadow, like as oil does the same thing on painters' canvas, and backed by this fact, and the public demand, we have no cause to make an apology.

I believe negative retouching is to photography a blessing without disguise. Chemical manipulations and their results have their shortcomings; the power and perfection of the best instruments and lenses have their limit. The photographer does not choose his model, but is presented therewith for a very brief time. These are some of the difficulties that present themselves. Who would require a carpenter to build a house entirely of wood because nails belong to the hardware trade, or without a square and plumb because they are masons' tools? It is the result that has to stand the measure of criticism, and over which the practical common sense stands in judgment.

Who is going to stop to inquire on what the cow was fed if the butter be good? Why should photography, more than any other art or industry, be limited in its expedients? If it be legitimate for the painter to obtain his drawings of photography, why should it be illegitimate to loan his pencil in return?

Negative retouching has not only been a valuable expedient in photography, but has taught, by the necessity it has imposed upon photography, superficial anatomy, and the value and the true relation of light and shadow, and so helped elevate the conceptions and taste of thousands of photographers. I say retouch the negative as long as it can be so improved; the question of "how much," depends upon the judgment of

the artist, and is as much subservient to his understanding as any other process or method that serves as means to the end, and must be judged, if judged honestly, the same as a drawing, painting, or a statue, solely on its merit as a result.

FROM E. L. RUSSELL, PENNA.

As I represent this section of the soft coal region, I think that it would be a good idea for me to answer the questions in No. 191 of the *Philadelphia Photographer*.

1. Yes; slowly, but steadily.

2. Better than for four years past.

3. I seldom show proofs. I use bichloride of mercury in weak solution, which gives the sitter a more satisfactory idea of what the print will be, saves time, expense, and trouble, and gives the negative a color similar to pencil-lead, so that there is no deception in the retouching. This has not always been so. I showed proofs until I found a better way a few years ago.

4. Yes, as a rule; always of strangers.

5 and 6. Yes, indeed. Really good work is usually appreciated to some extent by the most uneducated (and I have them among these miners of all nationalities), and more, of course, as the taste of the customer is cultivated. Financial encouragement is largely deficient. The greatest encouragement is that which comes from a genuine love of the true and beautiful, and a pride in doing as well as possible.

7. Yes; but am not able to say as to its doing permanent damage. I have two to contend with, and they take some money that I otherwise would have, but there are nearly if not quite as many good pictures made as if "cheap John" were in some other business. If they diminished physically in proportion to the mental and moral shrinkage, we would soon be free from the whole lot.

8. I seldom make more than one sitting, unless at my own instance.

9. Public taste has improved, and expects something up to the present standard. I would much rather every customer were an artist than the ignoramus some so evidently are.

10. Promenades, cabinets, and *cartes-de-visite*.

11. Yes; I keep adding them from time to time, and they pay.

12. Retouching and burnishing have improved my work (no matter what has been the result with others), but an intelligent use must be made of both. I have seen many pieces of work that would have been better without either, especially retouching.

13. When I located here nearly six years ago, I put prices higher than had ever been charged before; \$3 per dozen for *cartes-de-visite*, \$5 for cabinets, and \$6 for promenades, knowing that it would be folly for me to try to improve with the times, and take a place among "white" photographers at any less prices. Many times, while times were hard, and cheap competition took diabolical delight in coming down (not handsomely), I was strongly tempted to reduce my rates; however, my better judgment prevailed, and I never have reduced my prices. On the 5th of January, 1880, I raised the prices slightly, and there is little fault found. My present prices are \$3.50 per dozen for *cartes-de-visite*, \$7 for cabinets, and \$8 for promenades. I am glad I did it, and now the first plunge is over, it is just as easy to get the new as the old price.

I try not to ride any hobbies, but to please my patrons, get them to have as good work as I can do, do as pleasing variety of work as lies in my power, and I think, by pursuing this plan I have gained the confidence of my patrons. This saves many banterings (for in no single instance have I changed my prices to suit individuals), dissatisfaction with sittings, etc.

I expect to improve more in 1880 than in any preceding year. One reason is because I have done so more each year than in the one immediately before; the other reason is because I shall carefully study, and, as far as possible, apply to my own efforts the good things that will be presented in the *Philadelphia Photographer*.

You are at liberty to publish all or any part of the above, as you see fit.

FROM GEORGE N. COBB, NEW YORK.

Answers to questions in the November number of your journal, which you are at liberty to use as you please.

1. Business has been much better for the last year.

2. I think the coming season will show an increase in business.

3. I make two sittings on a plate, and show untuned proofs of both, and they usually order from the one they like best.

4. I generally secure pay after sittings, but with many patrons that I know are good, I get my pay on delivery of the photographs, and to some I present the bill after thirty and sixty days.

5. I am much encouraged to make continual effort to improve my work.

6. Generally they are.

7. Low-priced competition has not increased here, nor do I think it hurts high prices or first-class work.

8. We make two sittings on the same plate, and allow a choice to be made.

9. I think the public taste has improved, but there are some here and in the country that do not know so much as there is an improvement.

10. The cabinet size is very popular with me; also the ordinary card size.

11. I think fancy backgrounds are what the people want now for a change, as they have had plain backgrounds so much, and vignettes.

12. I think retouching, if properly done, is a necessity, and burnishing is quite as important.

13. I have not reduced my prices, but have tried to improve my work, which I know I have, and I think they are worth more instead of less.

FROM A. N. HARDY, MASS.

I send the following in answer to questions proposed by you in the *Philadelphia Photographer*.

1. Business has been better for the past few months than for several years previous at the same season.

2. The prospects for an improved business the coming year are good.

3. We show toned proofs from untouched negatives.

4. I charge \$1 in advance on each for card and cabinet sittings.

5. I feel decidedly encouraged to make every effort to improve the quality of work.

6. Efforts to please our patrons are, to a great extent, appreciated.

7. There has been an immense amount of low-priced competition in Boston for several years past, but I do not believe that it essentially hurts the demand for good work. Many of the better class of customers, sitting at low-priced galleries as an experiment, become disgusted, throw their pictures in the fire, and come to us for a resitting.

8. For cards and cabinets we always make two negatives, and oftener four.

9. Public taste has improved, and is more exacting than formerly.

10. Among my customers cabinets and panels are the most popular styles.

11. Customers often express their pleasure at seeing fresh backgrounds and accessories in their pictures.

12. Retouching I think is an improvement, when artistically done; when not so, none at all would be better. I think that much can be done by a printer of taste, who is painstaking, to improve the average work, which is not done in most galleries.

13. I have not reduced my prices to any extent during the depressed times, but have held to one price for many years. I get for vignette cards \$5, and cabinets \$8 per dozen, and other styles in proportion.

FROM THEODORE N. GATES, MASS.

If answering the questions will help you in the least, or contribute anything to "the common good," I cheerfully respond.

1. It is better than last year; in fact, I have no reason to complain.

2. Better than for some years. Everything seems to be improving.

3. Yes; I show untuned proofs, even if "they are a lie." I have tried all ways, and find this to work best.

4. \$1 at the time of sitting, and the balance when the pictures are delivered.

5. Decidedly so. Cheap photographs are looked upon with distrust. The people have plenty of samples of that kind, and are not in need of more.

6. Judging from the return of my customers with their friends for sittings, I should say "Yes."

7. It did, about a year ago, increase considerably, \$1 per dozen being a common

price. My neighbor asked \$1.25. It did me no damage. People are better satisfied to pay a fair price for good work than less for poor.

8. Always two, and if I feel any doubt or a little dissatisfied with my first effort, I take two more.

9. Yes; and as it improves they are less exacting.

10. Cabinets, and cards, and a few promenades; vignettes in delicate gray are most called for.

11. Only to a limited extent.

12. I claim that a negative retouched by an artist who understands modelling is an improvement. I do not think any one who is not an artist in the true sense of the word has any right to attempt to retouch a negative, any more than to finish a picture in water color. Very much of the so-called retouching is a damage rather than benefit. Burnishing, if not carried to excess, is a benefit in my opinion. There is still room for much "real" improvement in printing.

13. I have not reduced prices within two years, and when I am obliged to, it will be when we can buy gold dollars for less than one hundred cents. There are too many examples around that tell the result of so doing.

FROM EMERSON GODDARD, RHODE ISLAND.

I will give you a few lines in regard to business, which is improving, and if manufacturing continues good, it will undoubtedly be still better.

I do not always show proofs—very seldom—but show the negative; neither do I always demand pay in advance, except when forwarded by mail, and my losses are very small on undelivered work.

I am always striving to improve the quality of my pictures, and my efforts to please are generally appreciated by my patrons.

Low-priced competition has materially affected my business. \$1 and upwards is the price of card photographs in some of the adjoining towns, and other work in proportion.

I have no definite number of sittings in making negatives, endeavoring always to suit myself and patrons.

The public taste has, and is, constantly

improving, and consequently is more exacting.

Cards and cabinets are the most called for here; mostly plain backgrounds except two-thirds and full lengths.

Retouching is necessary, to please the public, in some instances, but nine times in ten it is overdone, in my opinion.

My prices are the same; \$3 and upwards per dozen for cards. I may be obliged to make them for less, but hope not.

I wish you every success in your endeavors to benefit the patrons of the *Philadelphia Photographer*.

FROM H. C. NORMAN, MISSISSIPPI.

In response to circular letter, I answer:

1. Business is good. I have all I can attend to without addition to force of assistants; in fact I do not care to be so crowded with work as to cause me to neglect a personal inspection of each and every lot of pictures that leave my gallery; to see that none go away dissatisfied, feeling that they have not received full value for their money.

2. Much depends on the "Big Muddy" and the present weak condition of the levees. With a favorable season, resulting in a rich harvest this fall, the prospects are that business will be good.

3. Very few desire to see proofs. I have so educated my patrons, who seem to have unlimited confidence in my ability to give entire satisfaction.

4. I never demand pay in advance, and very seldom request it, and then only from parties living at a distance. I have lost about \$8 or \$10 during the past three years. The parties owing me are among the poorer class, who would pay if called on, small sums at a time. I can well afford to live without calling.

5. The majority of my patrons are qualified to distinguish superior from an inferior work, therefore I can leave no effort untried that may raise the quality of my productions. It would be a great blessing if many other photographers were placed in a like situation as myself.

6. Yes, with very few exceptions.

7. It has. With my consent, I send all desiring cheap work, to the gallery across the way, at the same time speaking in terms

complimentary of the gentleman in charge. My competitor visits me every Saturday night, and hands over the cash for the week's work. It pays; try it.

8. I do not. I never make haste in lighting and posing. It is seldom necessary to make more than one negative.

9. It has; it is also more exacting.

10. Cards, cabinets, panel, and boudoir.

11. They are. Seavey's are preferred.

12. Retouching an improvement? I guess it is! You would think so when you have a customer come in and propound the following questions: "Say, Mr. Artist, can you straighten my nose just a little?" "Yes, sir." "I say, Mr. Artist, I am looking rather thin now; have been sick; can you fill out my cheeks just a little?" Happy is the man who is able to respond, "Oh, yes." Who can dispense with such an improvement as either the art of retouching or the burnisher?

13. I have, on cards only. I was charging \$4 per dozen; now \$3 and \$2.50 per half dozen. I scarcely ever receive an order for less than a dozen, therefore I take in more money than when I was charging \$4.

WHITE & SNYDER'S ELECTRIC RETOUCHER.—This new candidate for favor is advertised in proper place this month, and photographers would do well to read what is said about it. We have had opportunity to try and test it, from the making of the solution needed to work it, to applying it to a negative; and so far as we are able to judge, the invention is a most excellent one. The stippling motion of the pencil is secured by means of a galvanic battery, so that all there is to do is to hold the point over the surface to be retouched, and the work is beautifully done, without further movement on the part of the operator. The touch is soft; the degree is under the guidance of the hand; and it must become a very useful helper to every one who employs it. The battery is contained in a box only about eight inches square; hence the instrument has the advantage of compactness. It can be started instantly, and stopped at will; it works well, and it works willingly; the negative does not need to be ground. Every instrument is tested by the inventors before sending to market. It will prove a great time saver, for it does the bulk of the retouching, needing the handwork only for the fine finishing strokes. We are told that a great many already employ it.

AN ESSAY ON THE EDUCATION OF THE EYE

INVENTION.

BY JOHN BURNET, F.R.S.

(Continued from page 81.)

INVENTION is the great soul of painting, without which the being in possession of an accumulation of studies is of little avail; we may collect the materials, but we cannot build without a plan, nor can we construct that plan without a perfect knowledge on what to raise the superstructure. When Raffaele was commissioned to paint the apartments of the Vatican with representations of theology, philosophy, poetry, etc., it was necessary, in the first place, that he should know not only the origin and foundation of each of them, but also the character and history of those personages who ranked pre-eminent in the several departments of science, that by the combination of such figures he might be enabled to illustrate the subjects in hand; for it is by this method that the artist shows his imaginative powers; for though this part of the work may belong to the poet and historian in an equal degree, yet the mind of an artist, from his habits of thinking, and from a knowledge of what is within the power of his art, gives the illustration of the subject a more graphic turn than either; therefore, though the education of an artist's mind is in many things similar to the education of that of others, yet, in addition, he requires a knowledge of the various methods the great painters have employed to explain and exemplify their ideas; "for it is only by knowing the inventions of others, we learn to invent, as it is by knowing the thoughts of others we learn to think." Mengs observes, that it is invention which makes noble the art of painting, and discovers the force of the artist's understanding, and Raffaele obtained a rank with great poets and orators from this source. Invention being the work of the mind addressed to the mind, composition that of the eye addressed to the sight; yet though in many things the mind of the poet or historian is similar to the painter's, the power of the latter is much more limited; the historian may have a hundred pages to convey his story, the painter has but one; this circum-

stance has led mankind in all ages to allow him a greater latitude and license in embodying any representation; his invention, therefore, takes a wide range through the whole features of the event, whatever it may be, and enables him to combine in one focus every means of rendering the story attractive, clear, and effective; he invents, therefore, those arrangements which awaken the mind, from their giving rise to an association of ideas; he selects also those points which bear the strongest upon the character of the subject to be represented, and which, from their nature, are most palpable to the eye; to heighten their effect by the judicious introduction of images operating by means of contrast, and endeavors to combine the whole by the most natural and unaffected method. The power of invention, therefore, in a painter, must depend upon his extent of information, his command of the materials applicable to his art, and a felicitous choice of the particular incidents most striking to the eye. If he invents from history, it will be necessary to take the most current version of the story for his guide, and ingraft upon it those embellishments derived from costume, manners of the people, and local scenery; painting everything from nature, which gives a wonderful appearance of truth and force to the representation. From poetry or allegory a greater liberty of enriching the design will be allowed, as the whole range of ancient and modern fable lies open for his purpose of illustration. At the head of this department of the art, by universal consent, and especially by those who have most carefully examined his works, stands Raffaele; not only do his inventions embrace the most leading and most striking parts of the story, but he carries the spectator back to its commencement by a chain of the most natural circumstances, and shows also by the same felicitous extension of his design, those results which followed its taking place; thus exhibiting in one page the contents of a volume, such as we see in his Death of Ananias, his Transfiguration, the School of Athens, the Sacrifice at Lystra, and many others. Lanzi, speaking of this quality of Raffaele, says: "Various writers have mentioned the St. Paul at Lystra, one of the cartoons, as an example. (Fig. 33.) The

FIG. 33.



CROSSCUP & WEST, PHILA.

SACRIFICE AT LYSTRA.

Trüffelle, fr.

artist has there represented the sacrifice prepared for him and St. Barnabas as to two gods, for having restored a lame man to the use of his limbs. The altar, the attendants, the victims, the musicians, and the axe sufficiently indicate the intentions of the Lys-trians; St. Paul, who is in the act of tearing his robe, shows that he rejects and abhors the sacrilegious honors, and is endeavoring to dissuade the populace from persisting in them; but all this were vain, if it had not indicated the miracle which had just happened, and which had given rise to the event. Raffaele therefore added to the group the lame man restored to the use of his limbs, now easily recognized by the spectators; he stands before the apostles rejoicing in his restoration, and raises his hands in transport towards his benefactors, while at his feet lie the crutches, now cast away as useless; this had been sufficient for any other artist, but Raffaele, who wished to give a greater appearance of reality, has added several people, who, in their eager curiosity, remove the garment of the man to behold his limbs restored to their natural state." As the people called St. Paul Mercury, from his being chief speaker, Raffaele has alluded to this by a statue of Mercury in the distance, and a figure in the foreground with a chaplet of ivy, bringing in a ram, both indicative of the sacrifices to that god. By the uplifted hands of the restored cripple, and the youth who stretches out his hand to arrest the arm of the sacrificers, we perceive the effect of St. Paul's persuasions, in the same way as he indicates the conversion to Christianity of the woman of Damaris and Dionysius in the cartoon of Paul preaching at Athens. In the inventions of Raffaele we find the representation of any event extending its effects on the several spectators in a variety of ways, producing the most natural action and expression, and all conducive to the illustration of the subject; his rich store of materials from the Greek and Roman antique, with the inventions of those artists who preceded him in the restoration of painting in Italy, enabled him to embellish his design with an endless accumulation of incident, giving chasteness, simplicity, and the power of carrying the mind back to times long gone by; no one has pos-

sessed so great a command over his materials, or greater address in adapting them to his own purpose; the Greek gems and statues, the Roman basso relievos, the primitive character of the works of Giotto and Masaccio, the grand outline and foreshortening of the figures of Michael Angelo and Leonardo da Vinci, may be all traced through his works, but the inventive genius which has called them into new existence with a more natural and a more powerful effect on the spectator, is peculiarly his own.

Invention being more properly a combination of those qualities which affect the mind, and awaken sensations in the imagination of the spectator, the inventions of Raffaele affect different spectators according to their different degrees of taste or cultivation; whereas the inventions of Paul Veronese, Tintoret, and others of the Venetian school, being more addressed to the eye, please and captivate all beholders, from their harmony of light and shade, and their beautiful and gorgeous arrangement of splendid color. With Raffaele, the leading point of the story is boldly and nobly expressed, while its effects are diffused and spread over the countenances and actions of the adjoining figures, and revived and embellished by episodes and representations of the preceding and following events, acting upon the more subordinate or more extended portions of the composition, such as we see in the Ananias, the Heliodorus, the Sacrifice at Lystra, the Attila, and the Transfiguration. Thus what is effected in the one case by the diffusion of light and color, is produced by Raffaele through the medium of the expression and action of his figures; this it is that has gained for him the appellation of the "Painter of Mind;" and his making use of those materials from which the taste and cultivation of the mind is derived, gives to his works that charm which increases by contemplation, since they revive within us ideas of all the great and beautiful works we have ever beheld.

Invention being more properly the province of the mind than the eye, perhaps it is unnecessary to dwell longer upon it in this place; but we must always bear in recollection that the mind of an artist is formed from a contemplation of those circumstances

which it will be in his power to make use of, and that is one reason, amongst others, why I dwell more particularly upon the inventions of Raffaele than upon those of Michael Angelo; they are more practical, and can be adopted by those whose works are addressed to the feelings of all classes, or, as Lord Bacon says, "come home to the business and bosoms of most men." The inventions of Michael Angelo, on the other hand, elevate the feelings only of the learned, while they appear extravagant and overcharged to the generality of mankind; notwithstanding which, this is the spirit which ought to influence the taste and genius of other artists, and which made Raffaele exclaim, that "he thanked God that he was born in the same age with that great man!"* We need not go further than refer to his great work of the Last Judgment, where he introduces Charon ferrying over the souls of the damned, and other allusions to the heathen mythology, which give to the Christian creed the adventitious character of learned fable. On the other hand, Raffaele grasps his subject with the power of one who relies upon truth and nature for the effect; and, leaving the regions of poetry and fiction, gives an identity to the scene, founded upon the principle of simple facts being ennobled by the great powers of ele-

* "From time to time there arise upon the earth men who seem formed to become the centre of an intellectual system of their own; they are invested, like the prophet of old, with a heavenly mantle, and speak with the voice of inspiration. Those that appear after them are but attendants in their train, seem born only to revolve about them, warmed by their heat and shining by their reflected glory. Their works derive not their strength from momentary passions or local associations, but speak to feelings common to mankind, and reach the innermost movements of the soul, and hence it is that they have an immortal spirit, which carries them safe through the wreck of empires and the changes of opinion. Works like these are formed by no rule, but become a model and rule to other men. Few, however, among us are permitted to show this high excellence. Ordinary minds must be content to learn by rule, and every good system must have reference to the many and not to the few."—*Professor SEDGWICK'S Discourse on the Studies of the University.*

vated art. Besides, we must never forget that the public taste is already formed from a contemplation of the many great works now in existence, and which have stood the test of ages, and that it is only by being in some manner conformable to these we can ever hope for a favorable reception.

(To be continued.)

SOCIETY GOSSIP.

CHICAGO PHOTOGRAPHIC ASSOCIATION.—Regular meeting was held in their rooms, 229 and 231 State Street, Wednesday evening, March 3d, 1880, William Shaw, Vice-President in the chair; forty-five members present.

The minutes of the last regular and adjourned meetings were read and adopted.

The following were elected members: G. T. Barrett; E. B. Stuart; Dr. Norman Bridge, Chicago; I. N. Hobbs, Corydon, Iowa; and J. H. Fitzgibbon, St. Louis, Mo.

The Secretary read the following letters. From J. H. Scotford, Lansing, Mich.:

"As the gelatino-bromide plate is the question of the moment, perhaps specific directions for making the oxalate of iron developer will interest the members. Several formulæ have already appeared; but the one I use is nearly the same as Dr. von Monckhoven's, viz.: Dissolve, in a quart bottle, six ounces sulphate of iron, in sixteen ounces water (the water must be free from carbonic acid); when dissolved, add three ounces oxalic acid, which will form a lemon-colored precipitate of oxalate of iron, which is allowed to settle, taking about ten minutes. This precipitate should be thoroughly washed in several changes of warm water, to remove all traces of the sulphate of iron and oxalic acid, and then should be dissolved in the following solution, by pouring the solution upon the oxalate of iron precipitate.

Neutral Oxalate of Potash,	8 ounces.
Hot Water,	24 "

"This solution will dissolve most of the oxalate of iron, and will be of a deep ruby color. It is ready to use, by letting it settle, and decanting the clear portion into an ordinary dipping bath (such as we use for silver solution in sensitizing collodion plates),

and adding two and a half drachms of the following solution :

Bromide of Ammonium,	240 grains.
Water,	5 ounces.

"The office of the bromide is to clear the shadows, and also to prevent fog in the development. After the oxalate of iron, as above, has been dissolved by the neutral oxalate of potash solution, the bottle should be filled with water, and one hundred grains of iron-wire, or other clean iron, added. This solution oxidizes very rapidly, when exposed to the air, and, therefore, at night, when through work, should be returned to the bottle, and a small quantity of the oxalate of potash solution added, to strengthen it, and prepare it for the next day's work. It should also be kept above forty degrees temperature; otherwise, the oxalate of potash will crystallize. Should this occur, however, it will only be necessary to raise the temperature to the boiling-point again, when it will be restored, and, when cool enough, ready to use. Keep the plate moving during the development. I have had one of these solutions in use for several weeks, and it is still in good condition, making good negatives.

"The question may be asked: 'What advantage has this over the pyro developer?' It has two chief advantages:

"1. It gives a better printing color to the negative; equally as good as the wet-collodion negatives.

"2. It is more economical and more convenient, having only to take the negative from the plate-holder, and immediately dip it in the bath."

MR. GREENE.—In a letter from Mr. Carbutt, he gives the following formula for developer for the gelatino-bromide plates:

No. 1.—Pyrogallie Acid,	60 grains.
Water,	20 ounces.
Nitric Acid,	4 drops.

The acid makes it keep.

No. 2.—Liquid Ammonia,	$\frac{1}{2}$ ounce.
Bromide of Potassium,	120 grains.
Water,	20 ounces.

For use, mix; pour at once over the plate, placed in a black tray. It develops about as quick as a wet plate, if temperature is over sixty degrees.

Mr. Gentile read the following paper:

ON PRINTING PHOTOGRAPHS, ETC.

"Men who thoroughly understand printing are most invaluable to all galleries; but how difficult they are to be found. The really good, artistic printer is of as much importance as the good operator, in fact. If a negative sometimes—as unfortunately is often the case—be but indifferently good, the skilful printer can make up for its shortcomings, and finally turn out a really presentable portrait.

"Silver printing is by no means an art easily learned. How few really become first-class printers; what years of practice and study it takes to master the many difficulties constantly arising; and how few know the real cause of constantly recurring troubles, and the proper remedy.

"There are nearly as many theories about the manner of preparing paper for printing as there are printers. Some think that the silver solution at one strength is the best, others another; some float a long time, while others, the very reverse; some at one temperature, and others pay no attention at all to the latter important point; some printers dry their paper quickly, by putting it between pads directly they take it off the bath; others, again, simply hang it up, and let it dry spontaneously; and you all know that each printer has his own theory about fuming.

"I do not pretend to solve any of these difficulties, but I only wish to impress on you that silver printing is by no means an easy process, and one that can be entrusted to a mere tyro, notwithstanding that in your opinion it be more easily worked than carbon or photo-mechanical printing.

"As a rule, very insufficient and poor accommodations are provided for the printing-rooms; in the majority of establishments they are a disgrace to the profession. As a rule, dirt and slovenliness predominate.

"Carbon printing is being worked as successfully as silver; the great difficulty about carbon is, that those who went into it expected to become *au fait* of the *modus operandi* of the process in a few months study, and with less practice, whereas their successful silver printers have given years of study

to arrive at the results they now produce. Carbon, as silver, needs practice and close attention. In fact, any process in which that capricious component part, gelatin, forms the principal ingredient, will require patience and perseverance to work it, and the truth of this assertion will become evident to all those who engage in the manufacture of gelatin plates.

"Photo-mechanical printing was thought of as early as silver prints. A Frenchman, who is well known to all who have read the history of our science, Poitevin, took out a patent during the year of 1855, a quarter of a century since; however, very little was done with his process at that date; subsequently, other Frenchmen, Maréchal, and Tessie du Mothay, applied Poitevin's invention, and they only had indifferent success, which was about 1868; really, to Germany is due the honor of making anything like a success. Albert, of Munich, is in reality the first to make commercial prints; he took out patents in Europe and in this country; his process has been now worked for many years in the United States by the Bierstadts and others; he was the first to use a glass of considerable thickness instead of a lithographic stone; some of the results produced by him are beautiful, soft, and delicate.

"Next to Albert's process of those introduced into this country, is that of the heliotype process of Mr. Edwards, which is on the principle of Poitevin's process, only applied in an altogether different method, which he claims has not one point in common with that of Albert, and which we must believe, as the owners of the Albert patents have never attempted to interfere with the heliotype process. Next to come into the field here is Obernetter's, which, in reality, is only an improvement on Albert's. Mr. Gutekunst claims that he works according to a French process; however, the results are all very much alike.

"As to the so-called artotype, it is only the Obernetter process rechristened. I believe even other processes have been worked in this country, such as Gröss & Obermann's, and others, but they have been bought up by the heliotype people, and absorbed by them; and, as far as I know, such

is the history, in a few words, of photo-mechanical printing."

THE SECRETARY. — I have been asked many times by the members if the gelatinobromide emulsion would be furnished in bulk, and get the following reply from the manufacturer: "The experiment has been tried both in England and Germany, and does not meet with success, owing to the uncertainty of its remaining good after several heatings, which also modifies the quality of the plates; as it is found by experience that the plates are most uniform (an important factor) when the emulsion is used soon after its preparation."

The Executive Committee stated that the meetings of the Association would continue to be held in the rooms now occupied; the proposed change of location not being advised. The committee appointed to consider the advisability of holding a Convention in our city, and to arrange for the organization of a National Association reported as follows:

"Your committee to whom was referred the matter of considering the advisability of holding a Convention of photographers in our city, beg leave to report that we believe that it is for the best interest of our art-science that conventions should be held. Meeting together, and having a free and thorough exchange of ideas and methods, at the same time having a public exhibition of the results of our work, which we think will best advance the interests of the fraternity, socially, morally, and financially. The National Republican Convention will be held in our city in June, the Triennial Knight Templar Encampment in August, consequently both periods will be auspicious, as the railroad fares, hotel rates, etc., will be greatly reduced, and a Convention at either time would be largely attended by photographers from all points. The National Photographic Association was, during its years of active life, probably the greatest aid and assistance to photography that it has ever known, and while its usefulness is seemingly gone, its memory and the benefits we have derived from it, will live always. Let each do what he can for this effort to establish an Association which will be to the advancement and elevation of photography. To

this end we have prepared the following circular to the fraternity, which will be sent out at once :

CIRCULAR.

To the Photographers of America: Interested in the advancement of the art-science of photography, and desiring to raise the standard of all that pertains to our profession to the highest point of excellence,—it being the experience of the past that associated effort is a great and important factor in attaining such ends, and accepting the lessons brought to us during the existence of the National Photographic Association,—it is the desire of a large number of the fraternity that a new society be formed; and it is in response to this feeling that we have prepared this circular, to invite an expression from the craft at large.

Chicago, through its individual members of the fraternity, assisted by its local society, has undertaken the initiatory steps towards this organization, and desire sufficient encouragement to perfect plans to have a Convention this coming summer.

To this end, we ask your co-operation, and would like, at an early date, an expression of your feelings and desires in this matter.

G. A. DOUGLASS,
A. J. COPELIN,
O. W. HODGES,
Committee.

On motion, the report was received, and the committee requested to continue their labor in perfecting their arrangements for a Convention.

Mr. H. F. Neidhardt exhibited some 25 x 30 solar prints on albumen paper, made from gelatino-bromide dry-plate negatives, also a number of card and cabinet prints from same negatives; exposure, from three to eight seconds. The negatives and prints were inspected by the members, and were warmly praised for their excellence.

A number of negatives made on Carbutt's gelatino-bromide dry plates, also silver and artotype prints from the same, were passed around for inspection; these being furnished by Mr. Carbutt at the request of the Association, the members desiring to examine some gelatino-bromide negatives made by

an expert. The negatives and prints were examined with the greatest interest.

The Secretary exhibited a sample of Carbutt's Translucent Ruby Paper, perfectly non-actinic, and better for development than the ruby glass; also Carbutt's guide for mounting photographs, a very useful aid in placing prints on the mounts, was shown.

Mr. SMITH.—I have examined the gelatino-bromide negatives passed around to-night with considerable interest, but regret that no one shows any of babies, or brings in any failures. I use a camera that makes four exposures with one lens, and lately have tried gelatino-bromide plates of my own make. I tried to-day one plate, giving one and a half, three, five, and seven seconds, and developed with ferric-oxalate, and not a single good negative. If you desire success with these plates, you must be exact in time. You cannot successfully develop two negatives on the same plate, where the time differs; you must cut them apart before developing. The difference of a fraction of a second cannot be regulated.

Mr. HODGE.—How do you judge of the time of exposure?

Mr. SMITH.—I can tell from the appearance of the image on the ground-glass.

Mr. Platz exhibited some cabinet photographs in the so-called natural colors, made in Paris by Bounaud, and secured by Mr. Rocher for the Society. Several gave their views as to the manner of producing them.

Mr. Shaw invited the attention of the members to a number of 8 x 10 positives and negatives, made by him for photo-mechanical work, and gave the following instructions for making transparencies, reproducing negatives for mechanical printing, maps, reading matter of all kinds, copies of engravings, and portrait negatives.

Prepare your collodio-chloride as follows: In a bottle, put one ounce of alcohol; add eight grains citric acid, eight grains chloride of strontia; in another bottle, put four ounces of ether and three ounces of alcohol. Now, in a small mortar, put forty grains nitrate of silver, which incorporates in the alcohol and ether by speedily and effectually triturating it before evaporation of the ether; when this is done, add fifty grains of gun-cotton, and shake until dissolved. A few

drops of water may be ground up with the silver, before adding the ether and alcohol. Now add, in the dark-room, a small quantity at a time, the solution of citric acid and strontia, shaking thoroughly after each addition. Let it settle; shake up the collodio-chloride half an hour before using. If, after a few weeks, it shows lack of sensitiveness, add two or three drops of liquid ammonia.

For transparencies, flow the plate with the collodio-chloride, dry. To fume, pour a few drops of liquid ammonia on a piece of blotting-paper, and hold your plate six to eight inches from it thirty to forty seconds; then print in usual way, in printing-frame, putting black paper or cloth at the back of your transparency. Print until you see all the detail. Proceed in the same way for preparing all your plates, either for negatives or positives. Flow the plate with the following solution:

Iodide of Potassium,	. . .	20 grains.
Dry Iodine,	. . .	20 "
Water,	. . .	2 ounces.

Decant a small quantity, and reduce with water to about wine color. Flow over the plate half a dozen times, or more, then put the plate, without washing, into a saturated solution of hyposulphate of soda, and work back and forth about five minutes, when the plate will look as though the film had left it. Now wash thoroughly with clean water; be thorough with your washing, to avoid stains. Now flow again with the iodide of potassium solution of a light wine color, and give another thorough washing, after which develop with the following solution:

Pyrogallie Acid,	. . .	20 grains.
Citric Acid,	. . .	2 "
Water,	. . .	2 ounces.

Flow over the plate, and pour into a bottle or graduate; put in two or three drops of nitrate of silver solution, and again flow over the plate until you have secured the desired result. Wash thoroughly; and if more intensity is desired, put the plate into a saturated solution of hyposulphite of soda, and leave it a short time; then flow with ordinary iron developer two or three times, and wash thoroughly; then flow over a saturated solution of sulphuret of potassium. After the change is made, wash thor-

oughly, or it will commence to destroy the lines. Dry, and varnish, if needed.

Mr. Green called attention to Mr. Carvalho's article in the February *Bulletin*, and hoped some member would allow the privilege asked. Mr. Hesler said his studio was at Mr. Carvalho's command, and the Secretary was instructed to inform the gentleman of the fact, and invite him to demonstrate the value of his discovery, as proposed.

On motion, a vote of thanks was tendered the following: Messrs. Gentile and Shaw, for their instructive papers; Messrs. Carbutt and Neidhardt, for negatives and prints; and to Mr. Wilson, for his enterprise in giving a supplement for the minutes of the Association, last month, in the *Philadelphia Photographer*, received too late for the regular pages.

I neglected to say, that at our last meeting, Mr. Gentile exhibited an electric cut-off, or shutter, used inside the camera box, and worked by pressure of a button at end of a cord, which is of sufficient length to allow the operator to leave the camera and make the exposure from any part of his studio. The shutter worked perfectly, and was warmly commended by the members.

Mr. Gentile exhibited an electric retouching pencil, which attracted great attention. Any kind of point can be used, and the work is done perfectly and rapidly. The motion is circular, and the pencil touches the surface of negative under perfect control of the hand. The same firm having the shutter, will also sell the pencil.

MR. JACKSON.—Can any one here tell me how to prevent retouching from disappearing from a negative that has been retouched with a metal point, and after two months or so the retouching has entirely vanished? I never grind my negatives.

MR. MEYER.—I never knew of such trouble, but think if the gentleman will use mataline, which is made of Venice turpentine one part, common turpentine ten parts, thoroughly mixing the two, and rubbing on the negative with a ball of cotton, or ball of thumb or finger, he will find a remedy.

The Secretary exhibited a 4-4 No. 5 Voigtlander & Son's portrait lens. This is a new quick-acting combination, and is said to be very rapid. The importer, Mr. Benjamin

French, requests that it be tried by some members of the Society.

The Secretary exhibited one of Dr. Mills' burners for heating burnisher, noticed in *Mosaics* for 1880.

MR. DORAN.—I have one, and use gasoline in my lamp; the burner works like a charm.

MR. SHAW.—What's the expense?

THE SECRETARY.—We sent and got a few, as quite a demand sprung up from readers of the *Mosaics*; they sell for twenty-five cents each.

Mr. Shaw presented the Society with a copy in German of Kruger's *Vade-mecum of Practical Photography*.

On motion, a vote of thanks was tendered Messrs. Anthony & Co. for the *Bulletin* for 1880. On motion, adjourned.

G. A. DOUGLASS,
Secretary.

PHOTOGRAPHIC SOCIETY OF PHILADELPHIA.—Stated meeting held Thursday evening, March 4th, 1880, the President in the chair.

After the transaction of Society business, Mr. Carbutt exhibited two of Darlot's new hemispherical lenses, and called attention to the very ingenious arrangement of the stops.

Mr. Wallace exhibited two gelatin negatives, made on Carbutt's plates, with an eleven-inch Dallmeyer rapid rectilinear lens; exposures, three and five seconds.

Adjourned.

At the second stated meeting, held Thursday evening March 18th, the President presided.

Mr. Barrington, on behalf of the Outdoor Committee, made an informal report, suggesting several different routes for the 1880 excursion.

On motion the Society decided to make the spring trip by canal-boat, and the "Tide-water" Canal was most favorably thought of.

Mr. Thomas B. Craig was duly elected to membership.

Mr. Corlies showed some platinotype prints, the results of his first trial of the process.

After some conversation on cameras, the meeting was, on motion, adjourned.

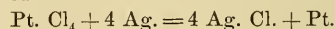
D. ANSON PARTRIDGE,
Secretary, 1815 S. Fifth Street.

GERMAN CORRESPONDENCE.

The Platinotype Process—Gelatin Plates for Diapositives—Gelatin Plates for Amateurs—New Hydrogen Lines Observed by the Help of Photography—Star Lines.

OF late the recently invented and patented platinum process of Willis, in London, has attracted much attention. The pictures are dull, of an agreeable, deep, velvety black, and, according to the inventor, they are decidedly more durable than silver pictures, as they consist of platinum-black, which is much less susceptible of being affected by sulphurous, or any other vapors, than silver. It is true that Monckhoven asserts that those pictures also fade, and he cites in corroboration of his statement the fact that a picture of that kind, which had been hanging in his laboratory, had suffered very considerably; but it is, nevertheless, a fact that I have in my possession platinum pictures made in 1866, which have to this day preserved their deep velvet-black and faultless white.

You will see from these dates that platinum pictures are old acquaintances, and, in fact, platinum pictures have been made this long while past, only by a somewhat different method than Willis's process, though the latter has certainly the merit of having considerably simplified the process. My platinum pictures were made by Grum, who used to first obtain a collodion positive in the camera in the usual way, then fix the same, and place it in a solution of chloride of platinum, by which operation platinum instead of silver, was precipitated on the contours of the picture, as chloride of silver was formed



The chloride of silver was removed by hypo, and the collodion layer was taken off with the picture and placed on paper, where it was allowed to dry on, the picture side on the paper, and the whole was then treated with a mixture of ether and alcohol, which dissolved the collodion skin, thus leaving the platinum picture remain alone on the paper. This process is entirely different from Willis's method, although the pictures look exactly like those obtained by him. The latter bathes paper in a solution of oxalic acid, oxide of iron, chloride of platinum, and

chloride of lead, and dries. Such iron-paper keeps for months; it is lighted under a negative about one-third as long as a silver picture; a weak, brownish picture appears, which is developed in a solution of chloride of platinum in neutral oxalate of potassa, when it will become intensely black. The picture is now simply washed in water. Fixing is not necessary.

As it appears from the foregoing, the process is very simple, and yet it is doubtful whether it will find favor in the portraiture branch. The public likes the glossy albumen pictures, which look as if varnished, with their soft, purple tone. The artist may heartily detest that purple tone, but the public do not consist of artists, and care very little for the taste and predilections of the latter. On the other side, however, the process is very well adapted for the reproduction of paintings and drawings—the platinum pictures look almost like *aqua tinta* sheets, lustreless, velvety, and of the finest modelling.

Besides this new, or rather not new, positive process, another seems to be in course of development, which may possibly work a perfect revolution among the processes in vogue now. The negative emulsions have been perfected in about two years to such a high degree of perfection, that there seems hardly any room left for improvement.

The idea comes now very natural to prepare paper with bromide of silver gelatin, instead of coating it with colored gelatin, for the carbon process, and then to make a positive picture by lighting for one second, or less, and consequent development. Positive pictures on gelatin plates are nothing new with us any more.

When I want to enlarge plates I light a gelatin plate under a negative, at a distance of thirty centimetres, in gas-light, five to ten seconds, and develop. I obtain thereby an excellent positive, which I can easily enlarge with the camera and the usual negative process. Formerly, I used to make for that purpose a diapositive with carbon, but that is a much more tedious manipulation than working with gelatin plates, and I am convinced that we can very easily produce beautiful positive pictures with development, upon paper which has been treated

with gelatin emulsion. Perhaps we will see the time when every customer can take along his elegantly mounted pictures, if he feels like waiting for them for half an hour in the reception-room. Of course, in that case the gelatin plates and pictures would have to dry a little faster than they do now.

The gelatin plates have imparted a new impulse, not alone to the portrait photography, but also to amateur photography. Since excellent, all ready prepared plates can be bought, which can be kept for months, and are easily developed and finished, photographing is within reach of anybody who has the means to spend some money for the necessary apparatus. Of course, the productions of the amateur are anything but masterpieces, and nobody need be afraid that through their influence the legitimate business might suffer; on the contrary, the more the public at large occupies itself with the technical part of photography, the more it will be able to appreciate its merits. An analogous case we meet in the musical world.

Here, in Germany, we have a numberless host of musical *dilletanti*, amongst which many an able *virtuoso* is to be found, and yet nowhere else such a remunerative field is to be found for the worthy brotherhood of musicians.

Recently, photography has been called into requisition by the men of science in aid of their researches about the nature of the stars, and very interesting results were obtained in consequence.

Some months ago I occupied myself with photographic experiments on the spectrum of hydrogen, as it appears in a Geisler's tube filled with hydrogen, and which is illuminated by an electric current. I obtained besides the known visible four main lines of the hydrogen, quite a number of, until now, unknown lines, in violet and ultra-violet. Recently, I repeated my experiments, with pure hydrogen, obtained by employing electrolysis, and observed in the main the same lines again. From the photographs, the fact is clearly established that hydrogen does not have only four lines in the spectrum, as assumed until now, but has in fact a great number (more than thirty). Of course, the four main lines are distinguished from the great mass by

their clearness and brightness, the two blue Hy and HS having such a strong photographic effect, that a Geisler's tube gives a clear image of the same in five minutes' time of illumination.

Amongst the new lines obtained by the aid of photography, there are several which are pretty nearly as clear and bright as the main hydrogen lines, and especially one of them is noticeable, which is identical with Fraunhofer's line H^1 , supposed to belong to calcium, and which must be considered to be the fifth main hydrogen line. This fact is of especial interest when brought to bear upon the theory of Lockyer, which caused such a genuine sensation in all papers devoted to the natural sciences, as also in political, and not less in photographic papers, and which purported to deduct from certain phenomena in the spectral analyses, the decomposition of the elements.

It is known that the vapor of calcium produces the two thick and broad H lines of Fraunhofer, in the spectrum of the sun. Huggins photographed the spectra of several fixed stars, as, for instance, Sirius, Vega, etc., and in those photographs only one of the two thick calcium lines of the sun spectrum was observable. Thereupon Lockyer declared that the calcium is divided into two bodies in the extremely high temperature of those stars, one of the two bodies producing the first, and the other body producing the second line, designated by H.

Since I have proven that hydrogen produces on the same place as calcium just as bright a line, I do not believe that the simple line in question of the fixed stars is produced by calcium at all; but, on the contrary, I hold the same to be simply the fifth line of hydrogen, thus disproving the theory of the alleged dissociation of the calcium. This belief seems to be the more justifiable, as the already known visible hydrogen lines appear much broader and more intense in the spectrum of the stars than in the sun spectrum. My theory is, moreover, almost proved a fact through the publication of the stellar spectra obtained by Huggins.

Huggins gives a picture of the violet and ultra-violet stellar lines, and, at the same time, of their spiral lengths obtained by him, and the same tally to really a remarkable

degree with the spiral lengths of my hydrogen line, which I published eight months ago in the reports of the Academy of Science at Berlin. I give you below a comparative statement of the spiral lengths of Huggins' and of mine:

Huggins' Stellar Lines.	My Hydrogen Line,
3968	3968
3887.5	3887
3834	3834
3795	3795

Huggins refers, furthermore, to six other lines in ultra-violet. (He worked with quartz apparatus, which is much more diaphanous for ultra-violet light than glass apparatus, which I used.)

I, however, received, besides the hydrogen line designated above, only one more, which was very weak and indistinct, and which cannot be distinctly classed. An approximate determination showed, 3769, and this number also almost tallies with Huggins' stellar line, 3767.5. This remarkable coincidence proves it almost beyond a doubt, that the lines Huggins observed in the "white" stars, are hydrogen lines, and that hydrogen forms the main part of the atmosphere of the white stars.

Huggins also recently photographed the hydrogen spectrum, and he too obtained the fifth line, which is identical with H^1 . The new hydrogen lines have not been observed as yet in the sun spectrum, but it appears that the fifth line has been seen "inverted," *i. e.*, as a bright line in the chromosphere of the sun.

Lockyer points to the observations of Young, according to which the line H^1 has seventy-five times, and the line H^2 only fifty times been seen "iniciert" in the chromosphere. Lockyer explains this by supposing that the calcium in the sun becomes dissociated in the sun, but I believe that the isolated H line seen is no calcium line at all, but is, in fact, the fifth line of hydrogen.

Very truly yours, DR. H. VOGEL.

BERLIN, February 28th, 1880.

By means of his new spectroscope, with compound sulphide of carbon prisms, M. Tholon has produced a remarkable map of the solar spectrum, no less than ten metres in length, and composed of about 4000 lines.

WHAT PHOTOGRAPHERS SAY.

THE SAN FRANCISCO SLANDER.

Mosaics is at hand; the best of the series you ever issued, sure. No chance to improve next year that I can see. I thank you kindly for the copy. Herewith find P. O. order for your signature for \$5. Send *Philadelphia Photographer* for 1880.

A slander most foul was published in the *San Francisco Call* last week, which stated that photographers were now making portraits of young ladies in high-toned circles, clad in tights, etc., for private albums, secret from parents or brothers.

I declare it is shameful. Try as hard as we may to elevate our art, and issue chaste productions, some unsuccessful craftsman—probably from motives of jealousy, or the dickens knows what—in a moment of despair, has laid a base calumny on our craft at large.

The leading photographers of San Francisco promptly denied, over their signature, any such doings, but that does not by any means undo the mischief.

May the year of 1880 be memorable to you as one of business boom beyond all its predecessors is the humble wish of

Yours truly, J. PITCHER SPOONER.

A GOOD WORD FOR THE PHILADELPHIA PHOTOGRAPHER.

I am very much pleased with the *Philadelphia Photographer*, and would not do without it, for the reason that it is devoted to *photography*, and giving its readers an insight into all that is new in the business, without filling its pages with processes and plans for working what only a few persons have adopted, such as carbon and artotype. Besides, I think your illustrations are of a higher order of merit than is generally used in publications.

I hope you will continue to publish the essay on "The Education of the Eye," for no one who does not understand drawing thoroughly can read it without being benefited. I believe every photographer should be able to draw, and have some knowledge of color, to be successful. GEO. M. BRETZ.

HOW VERY TRUE.

Mr. Adolph Ott, in the *Photo. Wochen-*

blatt, makes a long and amusing review of Mr. John Carbutt's recent lecture before the Franklin Institute, Philadelphia, on the "Artotype Process." He ridicules the idea of photographers in America paying any money for a license to use such a process, so well known in all its details, and so largely practised in Germany, and then adds very pertinently as follows:

"After Mr. Carbutt's defense of the patents for the process, follows a very tedious and superficial description of things, which nowadays even the most ignorant photographer knows, but it seems their much boasted of "smartness" seldom prevents the Yankees from paying too much for their whistle, and to be always ready, and anxious, almost, to be guiled."

Mr. Ott speaks intelligently, for he has lived in America. We are ashamed to own that what he says is only too true, much to our disgrace.

A BITTEN ONE.

"OIL AND CHEMICALS."

I have carefully read "Oil and Chemicals" in the last journal, and have often smiled at the assumptions of the would be styled *artists* who sneer at photography, and yet I must confess that their adverse criticisms, applied to the work of four-fifths of the photographers, are just; and the greatest curse photography ever has, or can suffer, is from the "tinkering Jims" in it.

I have never aspired to the name of artist, had no ambition that way, but I have tried to be a decent photographer, to do the best work I was capable of, to earn an honest living, and be not a curse to the profession and to the community; and I now declare, in consideration of the rewards I have received, that with the light I have, sooner than do it over again, I would perform the humblest duties on a firm, and—be at peace.

Your criticism on the *crayon artist* (?) who sells a solar print finished in crayon for \$5.00 (if any one did it for such a low price), is rather one-sided. To obtain the solar print at, say, \$3.00, and for the negative at, say, 50 cents, photography is benefited \$3.50. How much is it benefited by the photographer who sells twelve cards for \$1.00 or for \$2.00, or six gems for 25 cents,

or four *bon-tons* for 50 cents (prices of other work in proportion)?

I have two daughters in Cooper Institute. One hopes to be able to finish solar prints enough, in crayon or by "free-hand drawing," to keep her from want while waiting to sell the landscapes she intends to paint in oil. The other will try to earn her bread and butter by painting photographs in india ink and water colors, while waiting in hope of selling water-color paintings of flowers, or anything else, or while preparing for drawing and designing for wood engraving. They will, neither of them, injure or disgrace photography in any way; in fact, I do not think our art has anything to fear from the Cooper Institute. The pupils are well taught by gentlemen and ladies who are well up in art, and who do not need to abuse our art.

Some of the pupils are already benefiting photography by buying solar prints, and I believe if any of them ever injure or disgrace photography, it will be only after they become (as some of them may) photographers of the \$1.00 per dozen, or "tintype" sort.

I say, God bless Peter Cooper! in everything except his greenbackism, and I am beginning to believe he is more than half right in that.

I have a third girl capable of becoming an artist or a photographer. I would make

the latter of her if I thought better of the fraternity.

T. M. V. DOUGHTY.

MR. FITZGIBBON AS PERMANENT SECRETARY OF THE N. P. A.

MR. EDITOR: "You have a chance to give Fitzgibbon a good, staggering blow, and I presume you have seen the opening. In his February number, alluding to the difficulty of getting up another convention, he confesses that he can do nothing. Now, every one knows he sought the office of Secretary with great promises of what he would do for the Society, and every one knows that while you were Secretary, we had conventions; but since Fitzgibbon held the office, there has been stagnation, and, finally, the death of the Society. It would seem as though Fitzgibbon should learn, by this time, that not every man can drive a four-horse team successfully. Do not use me in this at all, but you can handle him alone easy enough. If I had thought sooner, I might have written a short inquiry as to how photographers got into their present rut, and also as to whether it was the horses that balked, or because they had no driver. But there is a good chance for you now.

"Yours, CINCINNATI."

[Yes, we saw the chance, but have no desire to hurt Mr. Fitzgibbon. Let us all try to make his declining days happy, and humor his dotage.—ED. P. P.]

Editor's Table.

PICTURES RECEIVED.—From Mr. S. S. HULL, operator for F. W. KERSTING, Galveston, Texas, a varied collection of specimens of cabinet work, both in silver and carbon prints. Mr. HULL employs the head-screen method of lighting almost exclusively, especially for bust pictures, and the effect is certainly very good. He says the damp, salt air of Galveston is a great enemy to the freshly silvered paper; nevertheless, he seems to manage to turn out excellent work, judging by the samples now before us. One of the sweetest and prettiest pictures it has been our pleasure to see in a long while comes to us from Mr. RUDOLPH UHLMAN, St. Joseph, Mo., in the form of a card photograph of a pair of dear little twins,—loveliness and purity together,—

fast asleep in their dual carriage. The little lace-capped heads drooping together, the soft, dimpled hands as they have fallen in sleep, the tiny slippered feet peeping from under the dainty little embroidered robes, all go to make up one of the most perfect personifications of "infant slumber, pure and light." The little ones—MARY and MARIE—are the children of A. McFARLAND, Esq., ticket agent of the Hannibal and St. Jo. Railroad Company. From Mr. A. C. McPHERSON, of McPHERSON & SONS, Delavan, Wis., a number of stereoscopic landscapes. Some of these views are real gems, especially those of the Wisconsin River, with its wonderful rock formations on either bank, and others of Lake Geneva. One in particular of the latter is exceedingly fine. The sun

is just breaking through some heavy clouds, and casts a glittering reflection on the bosom of the lake in a certain portion, while the remainder is still in shadow. The effect is very beautiful. From Mr. WILSON, Bridgeport, Conn., a couple of panel portraits of ladies. The work is good, and carefully finished, making a neat, stylish picture, such as ought to please *any* lady of good taste. Cabinet and card samples from Mr. C. RIPPEL, Milton, Pa.; nice, clean, good pictures. Stereoscopic views from Mr. J. L. SCHAUB, Atlanta, Ga., of the city and surrounding country. One from Lookout Mountain is really wonderful, from the immense distance which it takes in. From LEONARD & MARTIN, Topeka, Kansas, a couple of cabinet photographs. Cabinet portrait of little boy coasting in a snow-storm, from Mr. A. BARRETT, Whiteby, Canada. Several varied specimens of cabinet pictures from Mr. MOORE, Seattle, W. T. The subjects range from infancy to old age; lighting and posing are also varied to suit the sitter. From Mr. ——— VAN LOO, Toledo, Ohio, a set of character pictures, representing Rip Van Winkle in several attitudes and ages. This is a rather bold venture on the part of Mr. Van Loo; but he has certainly succeeded remarkably well. His characters have evidently been in full sympathy with him, and well maintained their part. The pictures are made with plain background, the accessories being etched and painted in. Several stereos from Mr. J. W. TRAMPTON, Brady, Pa., representing winter scenes in a log camp. There are nine in the series, and show all the varied phases of such a life. From Mr. T. S. JOHNSON, Thornton, Ill., another print from his exquisite negative, "The Winding of the River." We mentioned this picture not long ago; but a little judicious etching has introduced a boatman in his canoe, and a flock of birds skimming away over the distant landscape. We therefore feel called upon to remark again upon the beauties of this calm, lovely scene; one of the sweetest and most artistic we have seen in a long while. We only wish there were enough negatives of this charming picture to enable us to place it before our readers. MESSRS. ELMER & TENNEY, Winona, Minn., have favored us with some of their best promenade portraits, carefully and thoughtfully made, and some excellent stereoscopic views of the grand scenery on the Winona and St. Peter Railway. A further instalment of portraits from Mr. RUDOLPH UHLMAN, St. Joseph, Mo., includes a fine collection of "little ladies." Mr. UHLMAN'S forte is certainly with children, with whom he excels, and whom he secures in attitudes lovely and natural. His photography

is also excellent throughout. A man who can so well photograph children must win the best patronage of the older ones. Mr. F. C. WESTON, Bangor, Me., also sends us a number of cabinets of little misses in various winter attitudes, which are very cute and sweet. Mr. W. L. BATES (late BATES & NYE), Denver, Col., has sent us a cabinet of Miss JOSEPHINE MEEKER. From MESSRS. FILSON & SON, Steubenville, O., three cabinets, made with a No. 3 Euryscope lens, of a remarkable little girl, whose expression is changed to suit various characters; and some fine stereoscopic views "up and down the Ohio."

ITEMS OF NEWS.—Some excellent articles are laid over, including a description of an excellent copying stand, by Mr. F. M. SPENCER.—Mr. PHILIP HUMMEL has succeeded Mr. A. F. BURNHAM, at Fairbault, Minn., the latter gentleman having gone on a tour, as announced in our last.—Mr. CROSBY M. FRENCH is now sole proprietor of the photographic establishment at Garrettsville, O. (late FRENCH & HOLCOMB).—Mr. W. G. C. KIMBALL, Concord, N. H., lately illustrated the New York *Daily Graphic* with his views of Shaker Village, Canterbury, N. H.

SCOVILL MANUFACTURING COMPANY, New York, through their agent, W. IRVING ADAMS, Esq., in a trade circular, say: "We beg to advise you that all goods made from iron and other metals are constantly advancing, and, although we have made no change in prices since our last advices, we must soon do so if this upward tendency continues. We would suggest that orders for all metallic products of our manufacture be placed at an early day, even for future deliveries, so that we may purchase the necessary material before future advance." A word to the wise is sufficient.

MR. A. C. MCINTYRE, Brockville, Ont., and Alexandria Bay, N. Y., has sent us an admirable collection of views among the Thousand Islands, St. Lawrence River. Some of the loveliest "bits" are among them, and throughout the photography is excellent. What beauties grow up there year by year.

HOW BUSINESS IS, AND WHAT OF IT.—We close the list of answers to our "original thirteen" questions this month, having by them given a report of the state of trade from nearly every State in the Union. Our summing up of the evidence thus taken is crowded out, but, in our next number, we shall try to give it, and show

what good reasons there are for a cheerful photographic outlook, and for expecting increased business prosperity in our line in the future. Any photographer must get a good deal of help from these responses, and we are truly obliged for them.

MR. J. C. SOMERVILLE, St. Louis, Mo., requests that his advertisement be read regularly by all who are convenient to him. He is an excellent caterer in his line, fills orders promptly, and manages to please his patrons so well in their first dealings with him, that he holds their future trade. His enterprise and tact have built him up a great trade.

OLD BOOKS FOR SALE.—See the advertisement of "Bargains in Books." Ye who ought to read have here a chance to lay in a library of excellent helpers, at a little cost. The pile will not last long, and orders should come in for them NOW.

FUN is desired by all Americans, in everything possible. You can provide it for your patrons at a low price, and also bring business to yourself, by means of the funny designs for cards, circulars, etc., shown in the advertising pages. There is a laugh for every month in the year.

WHAT enterprise and thrift will do has been very plainly shown in the career of a year only of Mr. W. J. HAZENSTAB, the popular stock-dealer of St. Louis, Mo.. In April, 1879, he began business in a modest way, in two small stories, at No. 302 Market Street. A business boom began at once with him, and has so continued that he has been compelled to move to larger quarters, at No. 406 Market Street, where now, in a six-story granite building, he continues to send forth outfits and supplies in abundance. His general business is overseen *by him* in person; and, assisted by his two brothers, he is pleasing all who deal with him. He keeps down expenses, and shares with his buyers. His new advertisement appears this month, and it is a good one to look at. Be sure you read it, and then send Mr. HAZENSTAB a trial order.

MESSRS. DOUGLASS, THOMPSON & Co., photographers' supplies, 229 and 231 State Street, Chicago, Ill., have sent us their Bargain List No. 2 of lenses, camera boxes, miscellaneous goods, chemicals, and frames. All goods are offered at prices to suit the times. Photographers, give them a trial. We doubt not you will be satisfied.

THE *Practical American* is the title of a new monthly paper, edited by Dr. P. H. VAN DER WEYDE, published at 34 Park Row, New York. This paper is devoted exclusively to engineering, manufacturing, and building. The editor has long been well known to the scientific world, and his reputation will undoubtedly enlarge the circulation of his journal.

"THE PHOTOGRAPHERS' ASSOCIATION OF AMERICA," is the name under which our western friends seem to want to sail, rather than that of the poor old neglected National Photographic Association. There are many reasons for this, and we think well of it. We have no desire in the matter except to see photographers become more and more enlightened, and our art beloved to rise higher and higher in excellence and usefulness. Therefore wherever such a tide rises we join forces with it. Saratoga would be a charming place for health of the mortal body, but it is the health of the body photographic which is desirable now, and we are ready to do all we can to promote it. We shall watch with interest the growth of the enterprise.

At the late meeting, reported under "Society Gossip," a lively time was had, and it seems as though we are to have a meeting of the craft after all, during 1880, sometime.

MR. WELL G. SINGHI, Binghamton, N. Y., has been refurnishing his rooms elegantly. A local paper says: "Mr. SINGHI never neglects a thing that will add to the interest or efficiency of his art; and we feel justified in saying that no better appointed nor more ably conducted studio can be found."

MOsaICS, 1880, *are all gone*. We cannot supply any more, unless we can buy some back. We will give copies for any other two years in stock for one of 1880, when you are done reading it.

MESSRS. WILLIS & CLEMENTS (platinotype) have removed to more extensive quarters, at No. 123 W. 26th Street, New York. See their advertisement.

NEARLY seven thousand WAYMOUTH Vignette Papers have been sold since our last issue. None but "pear-shape" are now made.

SEE advertisement of SCHOLTEN'S Head-rest Clip. Said to be very useful.



J. VALENTINE & SONS.

Dundee, Scotland.
A BONNIE SCOT VIEW.

DUNDEE, SCOTLAND.

T H E

Philadelphia Photographer.

Vol. XVII.

MAY, 1880.

No. 197.

Entered according to Act of Congress, in the year 1880,

By EDWARD L. WILSON,

In the office of the Librarian of Congress, at Washington, D. C.

OUR PICTURE.

NATURE has already apprised us of the fact that the season for making the best photographs of her in her spring clothing is near at hand—the season when the young leaves, contrary to *human* nature, take their grayness before their greenness, and are in the loveliest condition for securing the softest effects of light and shade.

It behooves us then to put before our readers an example of what can be done with the camera out of doors, and to urge them to brush up their apparatus, and to be ready for that most delightful of all branches of our fascinating art—landscape photography.

We are indebted for the negatives from which our present studies are made to Messrs. James Valentine & Sons, Dundee, Scotland, gentlemen whose reputation as eminent landscape photographers is world-wide. Their especial field has been their native island, amid the scenes rendered famous by the romances of that immortal author, Sir Walter Scott, so that their pictures possess not only the highest degree of photographic excellence, but are intensely interesting historically. Our inability to get enough prints for our necessities in a reasonable time from a few negatives, has compelled us again to use several subjects, all varied in their nature as in subject, but all possessing that wondrous charm as examples of excellent photography—lovely gradation

of light and shade—which make them show forth the work of the master artist and photographer, and make them worthy of the careful study of all who would excel in outdoor work. The subjects used are six in number, and that our readers may have some information concerning them, we give what we can, quoting principally from the lectures on the lantern slides (made by the Messrs. Valentine) of Scotland, found in the two volumes of *Wilson's Lantern Journeys*, or books of travel in foreign lands and at home, as follows:

No. 14. *Balmoral Castle, Northwest of the River.*—This castle is the summer residence of Queen Victoria, and is in the midst of a very lovely section of the country; rich in deer stalking, grouse shooting, and every kind of Highland game. The property covers about forty thousand acres, thirty thousand of which is a deer forest. The present beautiful residence was erected near the old site. It is of white granite, and was designed and planned by Prince Albert. The grounds stretch back to the fine wooded hill, Craig-on-Gowan, bounded by a curve of the river Dee.

No. 88. *Silver Strand, Loch Katrine.*—The scenery of this lake is undeniably beautiful. Its mountain sides are bold and picturesque, but the traveller is more apt to be impressed by the dark, still, transparent waters, which in some places are five hun-

dred feet deep. Here and there the shore juts out in a pebbly beach that sparkles and gleams in the sunlight. Here we have a bit of this beach, which is the prettiest one on the lake, and for that reason named the Silver Strand.

No. 1846. *Path by the Loch Katrine.*—This road extends through a gorge, from Loch Achray to Loch Katrine, between the mountains of Ben A'an (1800 feet) and Ben Venue (2800 feet). This section is called the *Trosachs* (rugged country).

The road is a rugged labyrinth of mounds and rocks, covered with the richest vegetation. It winds in and out, up and down, and at each turn presents some fresh view of mountain or lake. Again it plunges down, down,

"Within the dark ravine below,

Where twined the path in shadow hid,
Round many a rocky pyramid.

* * * * *

All twinkling with the dewdrop's sheen,
The briar-rose fell in streamers green,
And creeping shrubs of thousand dyes
Waved in the west wind's summer sighs."

No. 1181. *The Old Man of Storr, Skye.*—The little island of Skye, on the northwest coast of Scotland, is a great resort for yachtsmen and excursionists. Its shores are rocky and rugged; and these rocks, from the sea, present some of the most grotesque forms. Of these, one of the strangest is "The Old Man of Storr," which is an isolated black obelisk of trap rising to the height of 150 feet. The cliff, of which the "old man" forms the pinnacle, is 2343 feet above the sea, and commands a most imposing and extensive view of the sea from its slope. As a photographic result, this picture is a splendid one.

No. 1196. *Sligachon and Scur-na-Gilleann, Skye.*—There is a name for you, hard enough until translated. This is also a bit of the land of Skye. The little town is Sligachon, and stands at the mouth of a wild glen. The view is backed by the grand form of Scur-na-Gilleann, or Scoor-non-Gilleann (Peak of the Youths), which is one of the most picturesque peaks of Skye. Its summit is 3220 feet high, and it is a hard climb to reach it—almost as hard as to worship at its feet with the camera, for it often sends down

messengers of mist which defeat all photographic attempts upon its loveliness. Our artists have mastered it splendidly this time. Our last view is

No. 1455. *Inverary Castle, from the New Bridge.*—On a level, green meadow, at the base of the grand conical hill of Dunquaich, stands the castle of the Duke of Argyle.

The town or village of Inverary was removed from this spot to its present site to make room for the castle. It was erected in 1750. It is a spacious quadrangular structure, with round towers at the angles, surmounted by a central tower. It contains some curious ancient armor and tapestry; also some good paintings.

The town is about a quarter of a mile from here, and on the end towards the shore stands a very elegant cross. Its exact origin is not known, but from its structure it is believed to date from the thirteenth century. On it are some names and Latin inscriptions, which would prove it to have been erected in memoriam.

The old castle stood near the sea, and to it the exciting scenes in the "Legend of Montrose" belong.

Thus we give you briefly a sketch of each of the admirable pictures sent us from the good friends and photographers in Scotland. They assure us that they use the ordinary formula found in the books, paying more attention to the choice of subject and the proper light thereon, than they do to their chemicals.

Study them well, for you will soon need all the help they can give you.

The prints were made at our own rooms, in the manner described on another page, by our head printer, Mr. H. A. Webb. The paper used is the S. & M. Extra Brilliant, obtained of Mr. G. Gennert, New York.

HOW TO WORK PAPER SUCCESSFULLY.

BY H. A. WEBB.

By working paper successfully, I mean the obtaining of uniformly good results; not good one day, and bad the next. In order to do this, we need, in the first place, paper that is in a uniform condition; for without this, we need not expect to obtain work with any degree of uniformity.

The first question that arises is: "In what particular is the paper of any one brand the most likely to differ?" A solution of this question will be a step in the right direction. If we go back to the albumenizing of the paper, we will find that it is always salted the same (the albumenizer can easily control this, and he understands the importance of having it salted the same); so we need hardly expect to find a difference here. The albumen can be maintained at the proper consistency; if it is not, it will be detected by the appearance of the albumenized surface.

Now, if the paper is salted the same, and the coating done uniformly, we very naturally expect to find it work uniformly; but that such is not the case, we very often find, to our discomfiture. There is but one other condition of the paper (that I can see) where there can be any great difference, and that is in its degree of humidity; and it is here, I think, that much of our trouble lies.

Let us look at some of the influences at work governing the condition of the paper in this particular. In order to do this, we must consider the nature of albumen in so far as it will be affected by these influences. One very important characteristic of albumen is, that it will absorb moisture quite rapidly when placed in a damp atmosphere, and will just as rapidly part with it when removed to a dry atmosphere. So we see that albumen paper is continually changing, as one or the other of these conditions of the atmosphere is changed.

When we consider the innumerable changes of atmosphere to which the paper is subjected, it does not appear strange that difficulty will arise in the working of the paper, if some attention is not paid to the condition of the paper in this respect; and very often paper is condemned, when all that it needs is to be placed in a damp atmosphere for a short time, previous to silvering. This is most likely to occur in winter time, when there is fire in every place the paper is kept, and every particle of moisture dried out of the atmosphere and paper. The keeping of the paper damp has been recommended from time to time, but the great importance of it has not been sufficiently impressed to secure the general practice. The paper should be sufficiently damp to

lay flat upon the silver solution without curling, and when in this condition it is not only much easier to work, but it will take the silver more evenly, and require shorter floating.

It may be that some will ask how they can keep the paper in this condition, when no suitable place is available, such as a basement or damp room? A very simple yet effective plan, is to construct a box about 20 x 24 x 8; then have a false top for this made of laths, and to set in about an inch from the top; on these laths are placed several damp blotters, and as the atmosphere becomes damp it settles down upon the paper, and keeps it just right for silvering; one end of this box is hinged, so that it can be dropped down, and the paper taken out as needed, either sheet by sheet or the quantity that is required taken out at once, without having to remove the top and blotters. I have constructed a box like this, and found it to work very satisfactorily.

Having considered what was needed, so far as the paper is concerned, let us turn our attention to the silver bath. Here I would first of all call attention to a mistake that is frequently made, and that is, trying to get along with too small a quantity of silver solution. It is not economy, but just the reverse. And much waste and worrying may be attributed to this cause; for, if we try to work a small bath, it is continually changing and getting out of order; while, on the other hand, if we use a large bath, the change in strength and other conditions of bath, caused by silvering twenty or thirty sheets of paper, is scarcely perceptible, and consequently the paper will work more uniformly. The quantity of solution required will be governed by the amount of work to be done. If twenty or thirty sheets of paper would be required each day, I would not advise a less quantity than one gallon; even one and a half gallon would be better. I make up the required quantity of silver solution at forty grains to the ounce, and add sufficient solution of carbonate of soda to make it slightly alkaline; shake it well, and allow it to settle. The precipitate of carbonate of silver I allow to remain in bottle, decanting off the clear solution.

A very good plan to adopt in commencing a new bath or silver solution, is to take a

sheet of paper and tear it in quarters; float thirty, sixty, ninety, one hundred and twenty seconds; be careful to mark upon each piece the length of time floated, and no doubt the one or the other of these will be right. The condition of the paper, I think, will govern the time of floating as much as the strength of the solution. If it prints measly or weak, it is undersilvered—needs longer floating; if it prints strong, but yet has a sunken-in appearance, then it has been floated too long; if, when floated long enough to get rid of measles, and yet does not print vigorous, the bath is too weak; if the paper turns yellow, and prints too strong, then the bath is too strong; but if the paper prints brilliant, and slightly bronzes in the shadows, then the silver is the proper strength, and the floating sufficient. I always use a glass rod, and prefer it to any other way of working. The size of the rod the most suitable, is about half an inch in diameter.

A word about floating may not be out of place here. The plan I have adopted is, I think, the easiest and most practicable way of getting rid of any bubbles that may have formed; instead of lifting up one corner at the time and breaking the bubbles, or touching the paper lightly upon the back and driving the bubbles out, as is frequently recommended, the sheets should be removed from the solution by taking hold of the two front corners, and raising until it clears the bath; if this is done immediately after the paper has been laid down on the solution, it will have expanded just sufficient to curl up a little at the back, and so allow the paper to be replaced without the edges dipping under, and it will be found that all the bubbles will disappear.

The paper, after being dried, is fumed for twenty or thirty-minutes. It should not be allowed to get too dry before printing; for this will make a great difference in the printing quality of the paper. If it becomes too dry, it will print with less vigor than if in a nice condition for working. This change is quite noticeable in damp, rainy weather, when the paper prints up strong and somewhat red. In that kind of weather, we need it moderately dry.

On this subject, more at another time.

(To be continued.)

NOTES AND PRACTICAL SUGGESTIONS.

BY A. M. DE SILVA.

(Continued from page 105.)

HAVING experienced considerable difficulty in obtaining tissue-paper suitable for covering the vignetting boards, I sought for a substitute. The tissue-paper supplied here has grown poorer and poorer: in places so open that, even with two layers, the prints would have a stippled appearance; while in others, lumps of pulp would cause light patches on them. There is a paper, very fine in texture, sufficiently transparent for the purpose, and much stronger than tissue-paper, known in the trade as "onion-skin." Although costing more per ream than tissue, it is far the more economical of the two, beside giving much better results. The only drawback is that it cannot readily be purchased in smaller quantities than a ream, unless the stockdealers would take it in hand and supply it, for which, when known, I am sure there would be quite a demand. This paper can also be worked upon with a stump or pencil.

The fitting up of vignetting boards to blend nicely occupies considerable time, especially when made from cardboard, in the old-fashioned way. A great saving of time and most beautiful effects can be obtained by using the Waymouth vignetting papers, for with these it can be so arranged that there is *no* abruptness in the softening off of the printing; any sudden chopping off, as it were, being fatal to the appearance of a vignettted picture. In these days of large heads, it seems to me that sizes for cards and cabinets, not so wide at the bottom of the "pear" shape, would come in very handily, there not being sufficient space on the picture to admit of a rounder form of blending, but rather longer; this can easily be overcome by gumming a little frill of cotton wool (pulled out nicely) on the lower sides of the vignette paper.

While on this subject, I will note a very ready way of adjusting the vignette paper. Most photographers take two cards on one plate, and as it rarely happens that the vignetter will be found in the right position for

a succeeding picture, considerable time is saved in adjusting it, not to mention the saving in wear and *tear* on the papers. After tacking pieces of wood on the printing-frame, sufficiently high to please your fancy, on this tack a piece of thick cardboard, in which a hole has been cut large enough to answer the purpose, at about the spot under which the figure on your plate will come when placed in the frame. Lengthwise of the frame (or otherwise, as the case may require, if for single figures taken on the plate vertically), *nail by the ends* two strips of wood, one at the top and the other at the lower side. By leaving the central part of the strips free, and having the opening in the cardboard (which may be left on permanently, if desired) large enough to admit of moving the paper over it without cutting off any of the vignetter, the vignetting paper can be slid between the strips of wood and the cardboard covering the frame, adjusted readily, and securely held with a small piece of gummed paper. Whether the negative to be printed be right or left on the plate it will answer; all that is necessary being to slide out the vignette and reverse it. This, of course, will answer equally as well for the old style as the Weymouth vignette papers, which are now taking their place.

One word of caution to those who use mucilage for attaching masks to their negatives. It will invariably cause the film to leave the plate. There are always pieces of damaged *unsilvered* albumen paper in a gallery, and with these cut into suitable size, and slightly wetted, masks can be attached to the negatives without any fear of the films lifting, or being marked—providing the varnish has thoroughly hardened. Again, india-ink, when used for stopping out the skies in negatives, or where considerable body is required, will, in time, surely destroy the film, although they be varnished with the very best varnishes; this being occasioned by the quantity of gum contained in it. India-ink should on no account be used; this I have found out to my cost. There is a red paint (Gihon's "Opaque") sold by the stockdealers for the purpose, which is much more easily applied, and which does not in any way affect the films, at least it has not

on any one of mine, some of which have been stopped out with it for six years past.

The editor of the London *Photographic News*, in his ramblings through the photographic studios there, appears surprised at the good state of preservation of the negatives of Messrs. Elliott & Fry. He writes: "The negative rooms afford subject for more wonder. There are four rooms stored with them, and, strange to say, not packed in paper, but loose and open in grooves. No special care in respect to heat or damp is taken, and the negatives do not suffer. Rising of the film or worm-marks are unknown, for Mr. Fry thinks that if negatives are properly varnished they run no risk." If I am not mistaken, Mr. Fry was one of the great advocates of albumenizing the plates, much in opposition to the ideas of the English photographers. The climate of the New England States is certainly as variable as that of England, and very few complaints are heard of reticulation of the film. It is the rule here to give the plates a preliminary coating of albumen; in England, it is an exception to the rule. Here, a case of reticulation of the film is a rare occurrence; there, judging from the frequent complaints in the journals, it is something to be feared. It has been over and over again asserted, that not only had good varnish something to do with the safety of the films,—and they use equally as good material there, and work just as carefully and clearly as we do here,—but that the albumenous coating played a not unimportant part (without taking into consideration the time and labor saved in the preparation of the plates), and would it not be interesting to hear from Mr. Fry, whether he still albumenizes his plates, which is most probable? If so, it would seem to bear out the property advocated. The greatest drawback to the albumenizing of plates in England, has been the wonderfully elaborate methods of putting it on, and also the fear of getting it into the bath. To albumenize the glass is as easy as "rolling off a log;" and if it gets into the bath, why—boil it out.

(To be continued.)

THERE will be a great gathering at Chicago. Prepare for it.

WRINKLES AND DODGES.

INTENSIFIER FOR BROMO-GELATIN PLATES.

I SEE, by your European correspondence, something about that new intensifier for gelatin plates (which, with the exception of the addition of hypo, has been known here for years), and about the uncertainty of the lasting quality of the negative with that treatment. I can answer, authoritatively, that it *will certainly spoil a collodion negative in due time*, and probably the gelatin; but it can be *rendered absolutely safe* by after treatment of the negative with a weak solution of sulphuret of potassium, which converts it into *allotropic sulphide of silver*, the most permanent form of silver, and unchangeable. I have negatives twelve years old treated that way. The double iodide of silver and mercury formed by the first solution is very unstable.

I wish to further add, that in case of an *undertimed* plate, the *hypo* should not be added to the iodide of mercury solution, as without it more detail is brought out, or, rather, the very faint detail is very much strengthened, the hypo acting as a restrainer, and useful only to retain clear glass in deep shadows. In treating with sulphuret, allowance must be made for the increase of intensity due to its use, and the first operation need not be carried so far. Both operations can be repeated if necessary.

D. BACHRACH, JR.

ABOUT RUBY GLASS.

It was a curious coincidence that on the day when I received the proof of my article, I received also the London *Photographic News* of February 13th, containing the suggestion that ruby glass be used for the dark-room, for developing gelatin-bromide plates, ground or smoothed on one side, which was just our idea, or, rather, Mr. Marshall's.

Mr. Marshall's room facing the south, was sufficiently lighted through two thicknesses of dark ruby ground. I suppose most rooms would need only one light of this glass. If this be found to cut off too much light, ruby of a lighter color can be substituted. I have found in Boston several tints of ruby for sale, and almost every large city contains some glass dealer who can accom-

modate photographers with light, dark, or very dark ruby, according to the amount of light to be cut off.

Perhaps many photographers might need a greater area of glass than we used in this experiment, but I suppose the quality of the light would be the same if a much larger surface be given to illumination by ruby ground-glass.

I think it a most excellent plan (and perhaps all experienced photographers adopt it), to close the eyes for a few seconds in going from the light into the dark-room. In this way the eyes get a momentary rest, and can see the objects in the dark-room much more readily than if they be kept open all the time.

The injurious effect of red light can be avoided by looking as little as possible directly at or through the red glass.

I hope that our experiment may be found of some use to the photographic fraternity.

THOMAS GAFFIELD.

RETOUCHING AT NIGHT.

While working around in my studio one night not long since, I fell upon a practical method for retouching by lamp or gaslight. It is as follows:

Make a cone-shaped box of thin boards, about eight inches square at the bottom, three or four inches at the top, and about fifteen inches high. Having cut an oval opening on one side for the light to pass, set the box over an ordinary kerosene lamp. Of course, both ends of the box are to be left open. On a rest on the outside of a box place a 4-4 or an 8 x 10 porcelain plate; then against this, and on the same rest, place your negative, the porcelain plate diffusing and softening the light.

You will be surprised, if you have never tried it, how soft, and yet how bold and distinct, the negative appears. Then you can just go ahead retouching as in the daytime.

If additional light is needed, cut a five-inch opening in the opposite side of the box, and adjust a nickel lamp reflector. With a little practice, the retoucher can get along almost as well as in daylight.

Enclosed find \$5.00; send the *Philadelphia Photographer*, including the January number.

L. W. ANDREWS.

ABOUT GLASS.

I lately got three boxes of photograph glass. On opening them I found the glass very wet, and it had been wet so long with what appeared like salt water, that the straw packing was rotten. I knew from experience that if allowed to dry in that condition the glass would inevitably be covered with rust spots (which are not pleasant on negatives), so I went to work to wipe it dry.

I was scrubbing away with two linen cloths (old towels), first, to wipe off the most of the water, and second, to dry the glass, when my wife, seeing me at work, asked why I did not use a woollen cloth for the final polishing?

I knew she always gave good advice, so I got a piece of an old flannel coat, and tried it, when "presto," I found I could do the final polishing a vast deal better, and more than fifty per cent. easier; and I write this in the hope to benefit some poor — who may not have a wife, or whose wife may not be as smart as mine.

T. M. V. DOUGHTY.

INFLUENCE OF TEMPERATURE ON CHEMICAL EFFECTS.

BY D. BACHRACH, JR.

Too much importance cannot be attached to the above subject by photographers, as has been fully demonstrated to me by years of experience, and especially that of this season. Those who have always had the good fortune to work in first-class rooms, always kept at a warm temperature in winter (for it is at this season that troubles from this cause mostly arise), with every facility of the A1 order, can scarcely appreciate the difficulties that sometimes occur, from variations of temperature, to their less favored brethren; and even those who have first-class facilities often fail to provide for this most important contingency.

It was forcibly brought to my mind this winter by the change caused on account of working in a new dark-room, not provided with the means of warming and keeping warm the silver solution, especially as the temperature fell greatly at night, on

account of the fires not being fully kept up then. It was a subject of remark in our establishment—the difference in chemical effects produced in the dark-room attached to the old light, and that of the new.

Every morning, until the temperature of the room had been up to seventy degrees, and for over three or four hours, the plates would coat slow, with liability to streak, work slow, and develop slow; while heating the developer made the liability to streak only more manifest, as, in order to produce good effects, the bath and developer should be of nearly equal temperature. It led me to make a series of experiments, which resulted similarly to others years ago, and which I will summarize as briefly as possible.

Taking as a basis a collodion with a good body (five grains of Anthony's No. 1 cotton to the ounce), and about seven and a half grains of sensitizing salts, I found that a plate coated in a 35- to 38-grain bath, at a temperature of 70° to 85°, took less time to coat, showed less liability to streak, could be put into the bath sooner, with less care in dipping, was far more sensitive, and in every way superior than when coated in a bath at a temperature of 35° to 40° (to which it would get over night), and which would have to be of a strength of 45 grains in order to coat in a reasonable length of time. These are assertions which are capable of demonstration by any one who chooses to take the trouble to do so.

Almost every photographer will bear in mind the changes that occur in the working of the chemicals, with sudden changes in temperature, not only in the ordinary dark-room chemicals, but in the printing and toning baths, paper, etc., unless these latter have been protected by proper warming before use. Even in gelatin and photo-engraving work, we have had whole batches of bichromated gelatin plates rip up from the glass in one night, in our early "green" days, when we were not acquainted with their vagaries.

But to continue the original subject. I further found that the temperature of the plate, at the time of exposure, exerted a greater influence on sensitiveness than the temperature before or afterward. Of course, the developer must be warmed also; but

the full benefit is to be derived by having this a few degrees warmer than the bath, *but very little*. I found also that when a cold bath was used, and a warm developer, that the image would be developed more rapidly than with a cold solution; *but no more detail would appear than with the latter*. It must be borne in mind that when the chemicals are kept up to the temperature mentioned, the bath must be weaker than when used cold.

To illustrate the effect of temperature in a most remarkable degree, I will mention what undoubtedly many have noticed—that if collodion happens to get on the back of a plate, *and is not taken off*, a streak, more or less marked, according to circumstances, will appear on the negative, corresponding to the one on the back. Now, this is caused by the rapid evaporation of the ether, reducing the temperature of the plate *on that part*, and thus causing the collodion on the face of the plate opposite to this portion of it to evaporate and set much slower; and when dipped in the bath, that portion of the plate is not as dry as the balance, and coats slower. In very cold weather, the effect will be a transparent streak; in hot weather, it will be more opaque than the balance of the plate, on account of the fact that generally the plates set too rapidly then. In cold weather, it will sometimes show reticulations in that portion of the plate. In fact, I have come to the conclusion that a very cold bath solution dissolves off a portion of the collodion film; also, that it is an unmitigated nuisance, and the cause of more failures in chemical manipulation than any other one thing.

I find, in examining our negatives, that the best results are obtained in the spring and fall months, and in summer, when the temperature is not over 85°. Extremely hot weather has its drawbacks, and causes too rapid drying of the plates; but if the dark-room be not excessively hot, very little trouble is experienced, in comparison to that caused by a cold room in winter.

When a bath solution is very cold, the collodion must be allowed to set much more thoroughly, and the plates must be dipped by a much slower movement; otherwise, streaks and unequal coatings are almost

sure to ensue, together with a much greater risk of pinholes.

It would be well for country photographers, who have not the city conveniences at hand, to consider this subject. The remedy we have adopted is as follows:

We have had a large tin box made, capable of holding two bath-holders of the size we use. This is coated inside and out (except at the bottom, outside) with three coats of asphaltum, which prevents corrosion by chemicals. Into this the baths are *suspended* (resting on the edges), the box filled with water, and a gas- or coal-oil jet applied to the bottom, which rests on two bricks, one on each end; and by this means the water in the box is kept, day and night, at a uniform temperature, and, of course, the silver solution also. After the water has once reached the proper temperature, very little heat is necessary to keep it so. If the baths are kept open when not in use, the heat will cause a slight evaporation, which is sufficient to relieve them of most of the excess of alcohol from dipping plates, and thus save evaporation in the regular dishes. Water may be added in the morning, when necessary, to make up for loss of solution and too much concentration.

Now, then, to sum up the results of these experiments. I find that with the collodion usually employed in most studios, the greatest sensitiveness, most uniform results, and finest details are obtained when the bath is from thirty-five to thirty-eight grains to the ounce, and is kept at from 70° to 85° Fahr., with the developer at the latter figure. In extremely hot weather, I find it better to work as low as thirty grains to the ounce, unless the tin box contains ice, to keep the temperature below 80°. I find, further, that when the bath and developer are, say, below 40°, greater strength of solution is necessary, with resulting inequality, spots and streaks, harshness, lack of detail, and loss of sensitiveness.

One point must not be lost sight of, *viz.*, that the temperature of the plate, at the time of exposure, exerts a greater influence than any one thing, so far as temperature is concerned. *Using a warm developer on a cold plate helps but little, and often causes greater inequalities in the result.*

I have made these deductions from careful experiments and years of varied experience, both outdoors and in the studio; and I hope that those who have had the troubles I describe will make the trials suggested, and be convinced of the importance of this subject.

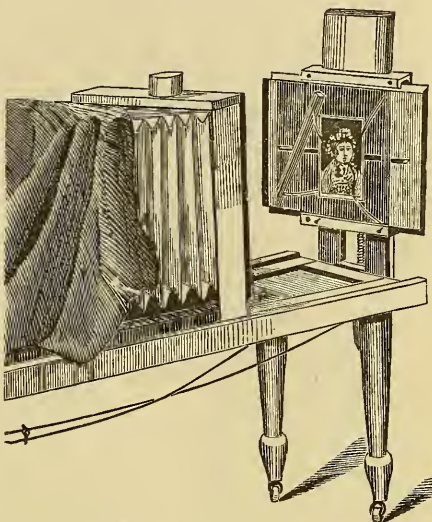
In conclusion, I will add that these deductions are not new or novel, but are based on the well-known fact that all chemical decomposition, whether through the agency of light or otherwise, is more active at a high temperature than at a low one. It must be borne in mind that if a plate is dipped in a very cold bath, the precipitation of silver in the film, by means of the sensitizing salts, is very slow, and allows a portion of the salts to pass into the solution; thus weakening the film and preventing the rich, creamy appearance desired; and also forming bromo-iodide of silver in the solution instead of the film, causing pinholes at times, and the unevenness spoken of, unless the bath solution is very strong, which is found to retard sensitiveness still more.

The greatest amount of sensitiveness is obtained when there is the least difference in strength between the bath and the salts in the collodion consistent with rapid coating; which result is to be obtained only by keeping the bath solution at a good average temperature.

SPENCER'S COPYING-TABLE.

THE copying-table, herewith illustrated, was not conceived and born of thought premeditated, is not a creation, but an evolution, a "survival of the fittest." Originally it consisted of the bed or top of the table as it now is, and a portion of the "target," or easel, consisting of an upright hinged to the end of the table, upon which the target was made to slide vertically, and was secured, when adjusted, by a wedge; tacks or pins served to fasten the picture to be copied to the target; and chairs or dry-goods boxes served the place of legs. After a time, I got disgusted with the hinge business, and fastened the target rigidly to the end of the table. Next, springs superseded tacks and pins; then came the legs and castors in two of the feet, and so on, little changes and im-

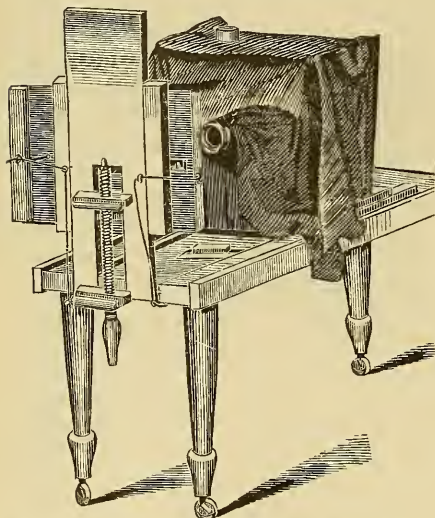
provements have been added, until it has become what you see by the cuts. Not costly nor perfect, but a handy contrivance.



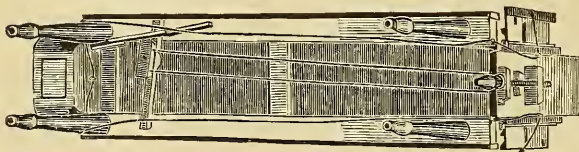
If I were to build one to suit me in every particular, I would have a base constructed somewhat wider and shorter than the table, supported by three or four castors, with two upright supports of the desired height, say, thirty inches, so as to pivot at the centre of each side of the table, so that the table could be tilted either way from the horizontal; the construction otherwise would not differ materially from that shown in the cuts.

The novel feature of this table lies in the arrangement of the *target* for holding the picture to be copied, and for adjusting the picture to the field of the lens, in its desired position on the focussing screen, and consists of a slotted upright of ash, seven inches wide and twenty-four inches long, screwed firmly at one end to the centre of the end of the table; upon this there is a jacket, sliding vertically, to which the movable block of a wood screw is attached. This block plays vertically in the three-inch wide slot in the upright; the rigid block near the pulley of the wood screw is screwed fast to the bottom of the upright slotted post. A strong cord band plays upon the screw-pulley, and around another pulley near the opposite end, and underneath the table, which serves as a tightening pulley to keep the band taut, which, it will be observed, is at-

tached to the centre of a bar transverse to the table, pivoted at one end, and held in place by a panel of heavy wire at the other. Now, by pulling upon the cord the wood screw is rotated, causing the jacket upon the



slotted post to move up or down, at the will of the operator, by which means the perpendicular adjustment of the picture is secured. The face of the jacket facing the camera has a rabbeted bar screwed to the



upper, and one also to the lower end of it, forming grooves, in which the target (or easel) slides horizontally; the target is made of half-inch pine, twelve inches wide, and eighteen inches long, rabbeted on the edges so as to fit easily into the grooves of the jacket-front; a piece of pine wood, five-eighths of an inch thick and one inch wide, is screwed or nailed to each end of the target, on opposite sides, to prevent warping. Midway from the edges of the target are two slots, beveled on the back, and separated by a space of three inches at the centre, the purpose of which is to allow the passage of a common iron screw for wood,

which is passed from the back of the target into strips of hard wood half an inch thick, one inch wide, and ten and a half inches long, entering the strips at their centre, and drawn sufficiently close to sink the head of the screw in the bevels of the slots on the back, but not to prevent the sliding of the screw freely in the slots; the inner edges of these strips are beveled down to obviate their casting shadows, and the springs that hold the picture to be copied, are screwed at one end to the ends of these strips; by this arrangement the springs and strips, or bars, to which they are made fast, may be quickly adjusted at any desired angle, to obviate casting a troublesome shadow, and to hold the picture. Now, to control the horizontal movement of the target, a cord is made fast to screw-eyes in the ends of the target, and passed through other screw-eyes in the edge of the slotted post, and at the bottom of the table on each side, and so back under the table through another eye at the back end of the table; this cord must be slack enough not to bind the vertical movement of the target. Now, by pulling upon this slack cord, the target and picture are made to move horizontally toward the opposite side. It will be seen that the picture to be copied, having been placed upon the target, by means of

the cords, may be adjusted and focussed without once removing the eye from the screen, until both position and focus have been obtained; which, when many copies are to be made, will

prove a great saving of time.

It will also be observed that I have made use of materials at hand. The wood screw is part of an old cast-aside vise for holding glass, screw-eyes, cord, box lumber, condemned printing-frame, springs, and a few nails and screws, together with my own labor in leisure hours, is the cost of the *novel* part of the device, and those leisure hours have saved me many hours of hard work, and continue to return a good profit in hours saved.

I will close this article by suggesting that leisure hours, with head and hands made busy, are the most profitable hours of life.

MANSFIELD, PA.

F. M. SPENCER.

ARE PANORAMIC VIEWS MADE IN SECTIONS CORRECT?

BY JOHN MORAN.

THERE is in the minds of many photographers the thought that it is possible to combine two or more negatives, and join them together perfectly; that by a careful arrangement of the camera, a building or view may be photographed in sections, and so joined together that all the lines and points will fit perfectly.

The very skilful double printing by the Schreiber Brothers, and afterwards by Mr. F. Gutekunst, of that magnificent series of negatives of the Centennial Buildings, would seem to give color to the idea; but I think I can demonstrate that it is a fallacious one, and that the perfect junction of lines and points of an object made in sections, on different plates, is an impossibility. This was lately brought to my mind very forcibly, in making a salt warehouse for another photographer, who found fault with me because the two lines of the building did not join perfectly. Now, this idea that it can be done is an incorrect one, indulged in by the photographic craft; and my present effort is to show why it is false.

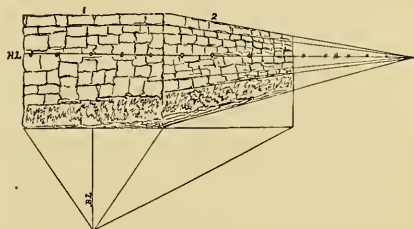
Combinations of that kind have apparent correctness, but are false, in truth. All objects, to be drawn truthfully, or photographed correctly, must be made as seen by the human eye. But by this method of making pictures, embracing an angle of 90° in sections of 30° each, there is a change of the point of sight as well as the horizontal line. The perspective of the photograph must therefore be false. In making a view including an angle of 90° , the base line is central to the view; but in the sectional view, the axis of the lens is turned obliquely to the two wings of the object, and, of course, the perspective is changed.

In some subjects, there would be one part parallel, and the other parts, in very acute perspective, dependent upon the nearness of the object to the lens; and, of course, it would make an absurd picture.

Diagram No. 1 is supposed to represent a stone wall, as seen in correct perspective. The wall is parallel; and after making one section parallel to the wall, the camera is

turned to the right, with the following result. The dark dotted line marked H L is

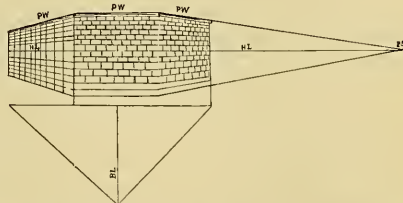
FIG. 1.



the horizon line, and becomes the centre of the vanishing lines. I think the diagram will explain itself. B L is the base line, and location of the camera in both views.

Diagram No. 2 represents a section of a brick wall. Now, who would suppose such a result could be made from a wall that is parallel? But the base line will show that to be the case. Could anything be more unlike the truth than this? Yet it is the

FIG. 2.



exact appearance that would be presented from a given point by the camera to the wings of the view. The line H L, H L, is the horizon line; P W, P W, P W, is a parallel wall; P S, the point of sight.

Ridiculous as this diagram seems, it might be made still more so by still further exaggerating the perspective. The camera would make just such a perspective, if the view

FIG. 3.



was made in three sections, and at the given angle of the diagram.

Diagram No. 3 is more instructive than either No. 1 or 2, as it explains, I think,

the difficulty that is frequently met in the course of our work. This diagram represents a storehouse which I was obliged to photograph in two sections, as the street was too narrow to do it on one plate. It was then joined together, with the above result. The dotted lines are the perspective lines of the first picture. It will be noticed that the vanishing point is outside of the picture. The crossed lines are the perspective lines of the second picture. The vanishing point, it will be seen, is in the picture. But in the picture on the left, it is taken at a much less acute perspective, and the vanishing lines are far out of the picture. This shows very clearly the impossibility of making a building in two sections, and combining them so as to give correct perspective.

If a ruler is tried on the drawing, it will be found that the lines above the horizon are heaped up where they join, while those below are crushed down, looking slightly concave.

I regret that it is impossible to make these combinations perfectly, for it would be a great help to us under many circumstances; but, alas, science is against us.

I MET a melancholy old bachelor photographer some time ago, whose life was wretched because he could not secure a good picture of a cat, since all cats refuse to remain still in "a strange (photographic) garret."

He has resorted to the expedient of rearing a cat in his studio. Kitty grows nicely, and the photographer is living on the hope of ultimately and successfully realizing his pent-up desires.

How can one expect to get good photographs from nature, when the head is ringing all the time with this dismal whine of the besoured poet:

"A comely face hath nature, but no heart,

None! Are you sad? She smiles. Is your grief past

And gladness come? Her skies are overcast."

And yet how true it is. Did you ever go out for a day under the sky unless the wind blew, or the rains fell, or thunder and lightning—*something*?

G. W. W.

AN ESSAY ON THE EDUCATION OF THE EYE

WITH REFERENCE TO PAINTING.

BY JOHN BURNET, F.R.S.

(Continued from page 121.)

COMPOSITION.

By composition is generally meant the form and arrangement of the several parts considered as a whole; consequently, the form or plan of any composition is the first process the painter practically commences with. The nature of the subject having been settled, he weighs in his mind the effect to be produced upon the spectator; he therefore arranges his figures and objects accordingly, and endeavors to distribute his materials in that form which will best accord with his intention. The illustration of his story, the distribution of his light and shade and color, the localities of the scene, all present their individual interests to his notice; while his imagination embodies them into that congregated form which seems best calculated for his purpose. Here it is, that the memory is called into action; without precedents he cannot judge, without materials he cannot compose. Having now laid down his plan of operations, he applies to nature to furnish him with the means of giving variety and originality to his work; but to bind her to his purpose, he must have a settled knowledge of what he is seeking, he must have a quickness of eye to take advantage of accidental arrangements, and a plan of methodizing his ideas, so as to be able to secure what he acquires, without which it will be impossible to produce a composition upon which he can calculate with any degree of certainty as to its effects or its stability, and what he paints one day he may obliterate the next. Composition not being an inherent quality of the mind, but the result of long acquaintance with the nature and arrangement of the compositions of others, it generally follows that all wayward and capricious compositions, established neither upon natural grounds nor upon the scientific arrangements of those who have preceded us, seldom outlive their inventors, for pleasing only by reason of their novelty, they gradually lose their interest as that novelty vanishes; or, as Dr.

Johnson expresses it, "the irregular combination of fanciful invention may delight awhile by that novelty, of which the common satiety of life sends us all in quest; the pleasures of sudden wonder are soon exhausted, and the mind can only repose upon the stability of truth."

Geometric forms in composition are found to give order and regularity to an assemblage of figures, for, in fact, we can have no idea of form without a portion of distinct shape, which being arranged so as to make one part of the composition dependent on another for its completion or extension, produces an harmonious assemblage of lines, independent of the aid of light and shade or color. Groups of figures without some appearance of geometrical form apparent to the eye, would produce a confused effect upon the spectator, in whose mind their appearance would indicate one subject as strongly as another, and look picturesque, when such character might be destructive of the impression intended to be produced. We have an excellent example of the influence of lines, or arrangement of parts, in the composition of *Attila*, by *Raffaello*; we see on one side the rude irregular descent into the *Campania* of *Rome* of the congregated tribes of the *Goths* and *Vandals*, leaving fire and desolation in their rear, and hurrying forward with savage wildness; opposed to which, enters the head of the *Christian church*, with the ministers of the cross, calm, meek, dignified, and upright, secure in the protection of heaven, whose messengers are seen descending; those noble warriors, *St. Peter* and *St. Paul*, spreading by their appearance terror and dismay into the hearts of *Attila* and his followers: and thus it is that the painter is enabled, by the assemblage of lines and forms, to produce upon the mind those sensations which the poet effects by a combination of words, or the composer of music by an arrangement of expressive sounds.

To simplicity and regularity of form we are indebted for the foundation of what is great and sublime, for, as *Johnson* expresses it, "sublimity is produced by aggregation, and littleness by dispersion." In architecture we find this a main cause of grandeur: *Burke* says, "vastness in any object, infinity,

succession, and uniformity of parts in building, or any object in nature, are all sources of the sublime, succession of uniform parts creating a kind of artificial infinite, and this may be the cause why a rotund has such a noble effect in building." Having observed before that the architecture introduced into the works of *Raffaello* is of a simple and uniform character, it often seems to have been his design to carry out and extend the perspective and general form of his plan by the arrangement and position of his figures, such as we see in his *School of Athens*; and *De Piles* says, "he found in some of his sketches, plans and scales of proportion." One or two memorandums which I found amongst the collections of drawing left to *Christ Church, Oxford*, by *General Guise*, seem to confirm this observation. The memorandums are written upon the side of sketches illustrative of the remarks, one of which I have given in *Fig. 35*, containing the ground plan, also the figures seen under the influence of the perspective; the other showing a circular arrangement of figures, such as we see in the lower part of the *Transfiguration*, and in the *Death of Ananias*, viz.

FIG. 34.



Crosscup & West, Phila.

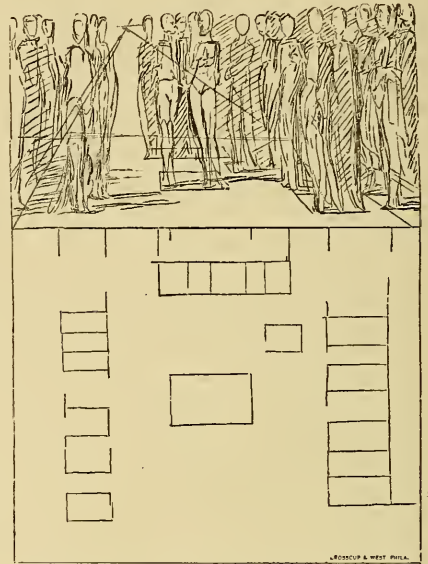
To *Dr. Barnes*, of *Christ Church*, I am indebted for the very great interest he took in enabling me to procure copies of any of the drawings. For the translation of the memorandums, and the remarks upon the designs, I am indebted to the kindness of *C. L. Eastlake, Esq., R.A.*, whose intimate knowl-

edge of the compositions of Raffaele must give his observations additional weight.*

Independent of forms in composition most suitable to the subject, and arranged in the most natural manner, it is of the first consequence that the spectator ought to have such a view of the representation as will be most effective and uninterrupted: this obliges the artist to design those figures in the near part of the composition either in kneeling or stooping positions, that they may not intercept the figures behind, or to elevate those background figures by a higher plane, such as we see in the *School of Athens*, the *Ananias*, the *Incendio del Borgo*, *Elymas the Sorcerer*, and others; or he may compose his piece upon the principle of the *Heliodorous*, which, leaving the space vacant in the middle, allows the eye of the spectator to range from the foreground to the distance without interruption; but in whatever form his composition develops itself, it is not more necessary to preserve such form in the strongest character than it is to give the spectator the most pictorial and comprehensive view of the subject; to enable him to

judge of this quality, it will be necessary not only to lay down a ground plan, but to

FIG. 35.



model the groups and individual figures, as

* Translation of the memorandum on the side of the sketch representing circular composition:

"It is to be observed that the first thing to be considered in an historical composition is where the point (*id est*, the spectator or spectator's eye) is to be placed, whether in the middle of the work or on one side, and so to determine its situation that the important figures be distinctly visible, and not concealed by others, and then begin the design. It is my opinion, confirmed by the practice of the most skilful men, that the mode explained by a drawing in the margin (is generally fittest), viz., by contriving that those figures which are nearest to the point should present their backs, those further removed their sides, and so on in perspective, as if a circle were drawn and figures ranged round it, so should an historical composition be designed."

In illustration of the above, supposing an action to be represented in a circle, which would be quite natural if the object of attention were in the centre, the spectator might either view it so as to be himself without the circle, or be supposed within it. In the latter case, the nearest figures would have their sides towards him, in the former their backs. Thus, when the spectator sees a semicircle, he completes the circle by his forming a part. This arrangement was

adopted by the early Italian painters in their sacred subjects, and from its fitness was never abandoned by Raffaele. The *Madonna di Foligno* and the *Dresden Madonna* are remarkable examples, as in these pictures, the *St. Francis* in the first, and the *Pope Sixtus* in the other, turn to the spectator who contemplates the work, and intercedes for them. The object, in short, by this semicircular arrangement was to mix up the spectator with the divine or sainted personages represented, and to make him feel in their presence.

But in more dramatic representations, in which the spectator might be interested, but not a *party concerned*, Raffaele adopted the more picturesque arrangement, and after him this was unfortunately applied to *devotional* subjects. The drawing by Raffaele and the note recommend the picturesque arrangement, but as the whole works of the master are the best commentaries on his note, it may safely be affirmed, that he could not have intended this principle to apply to votive pictures; at present, indeed, in this country, when altar-pieces, and especially mere assemblages of sacred personages, are rarely painted, the directions contained in Raffaele's note may be considered of universal application; it is only in the critical history of the art that they might lead to false conclusions.—C. L. E.

we know to have been the practice of the best artist, from Michael Angelo and Raffaele down to the present, which will also, even though roughly executed, suggest the most natural effects of the light and shade.*

* Translation of the memorandum at the side of the drawing Fig. 35 :

"This is the mode the painter should observe in composing his histories, so that the disposition of the masses should be unconstrained, as if the composition followed the advancing sight in order that the history or picture may be satisfactory to the spectator, and particularly to the experienced spectator. For if arranged without this rule, the said history will be put together defectively, this (viz., the mode alluded to) being the true practice adopted by the most skilled and intelligent in the art. This will appear by consulting the works of those painters who are most famous; it is from their adherence to this rule that their works have been so much praised, and with the best reason, for this is the true principle."

The rule here alluded to, and which is sufficiently explained by the drawing which accompanies it, relates to *depth* of composition, as opposed to *superficial* or basso-relievo composition; the mere surface is capable in variety, in height, and in width; but these varieties may exist while there is no variety whatever in the *plan*; the figures should therefore occupy the extent of the ground plan as completely as when brought to the surface they appear to occupy the height and breadth of the surface or face of the picture. Thus the three possible dimensions are occupied, the art being generally concealed by avoiding too regular a variety, and by doubling the masses somewhere. It only remains to be observed, that of the three applications of varied arrangement, that of the *depth* is the most strictly picturesque, because it most effectually gets rid of the flat surface, and suggests foreshortened limbs and figures, which are most to be met with in the latest works of Titian, Raffaele, and Michael Angelo; but Corregio, who was from the beginning devoted to *gradation* in forms (perspective) as well as *chiaro-oscuro*, was also an early lover of depth in composition, and often of foreshortening.—C. L. E.

Fig. 36 is part of a Roman basso-relievo, from which Raffaele took the ceremony of the Sacrifice at Lystra.

Fig. 37 shows his adaptation of the ideas of others to his own purpose, being a figure of Massaccio's, which is converted into his St. Paul Preaching. Vide Reynold's Twelfth Discourse.

Having decided upon his general form of composition, the several portions of the design next claim his attention; those portions of most consequence to the illustration of the story are to be brought into notice, while

FIG. 36.



other parts are made subservient, by being thrown into shade or more intercepted by their situations; action and repose, masses convex and concave, lines regular or picturesque, spaces diminishing or increasing, are all to be combined in producing an harmonious result upon the eye and mind of the spectator.

FIG. 37.



Massaccio

FIG. 38.



Raffaele

Crosscup & West. Phila

nious result upon the eye and mind of the spectator.

We have noticed the peculiar properties of objects under the influence of perspective; viz., circular forms becoming elliptical, spaces diminishing as they recede, objects intercepting those behind, while those on the foreground possess more detail and minutiae; these qualities are, therefore, to be engrafted upon the several portions of the composition, that it may have the appearance of truth, and enable the artist to give his work the firmness of nature. In

selecting examples illustrative of these remarks, it will be sufficient to give one or two of the most palpable, that the student may be made aware of their character; after which, the whole range of composition, from the revival of painting down to our own time, will be rendered subservient to his investigation. As it is the character of spaces to diminish as they recede from the eye, we often find in the works of Raffaele, and others, this feature engrafted upon portions of their groups, as in Fig. 39, part of the cartoon of Ananias.

FIG. 39.



Crosscup & West, Phila.

As it is the character of objects to intercept others, more or less, as they recede from the foreground, and as it is their character also to diminish and possess less of detail by

FIG. 40.



Crosscup & West, Phila.

their receding, we perceive this principle carried into the works of the great founders of the art in a variety of ways; we can trace it in the Greek and Roman basso-relievos,

in the figures and heads of Michael Angelo and Raffaele, and in the works of those who have collected from the great stores of nature and art. The example, Fig. 40, is from Titian, part of a subject formerly in the church of St. Nicola de Fiari at Venice, now in Rome.

This regularity of diminution imparts to a work a character of simplicity, and at the same time assists the artist in giving depth to his composition, one figure acting as a background to the other.

This regularity of diminution not only assists in giving regularity and simplicity to a work, but enables the artist to carry the eye of the spectator into the depths of his composition. We also find it often employed in giving solidity and firmness to those heads or objects nearest the eye; one portion acting as a background to the other, giving to the whole that advantage which arises from the size, detail, and firmness of foreground objects in nature: Fig. 41 is a further illustration of the same principle, being part of

FIG. 41.



a design of Rubens, the picture of the Woman taken in Adultery, in the collection of Mr. Miles.

In following up the examination of composition into its component parts, we find it necessary that they should all combine to produce one result upon the spectator. Raffaele, in extending his composition into the surrounding parts, employs his whole power in illustrating his story, either by episodes, which embellish and enrich it, or by figures expressive of the circumstances which have preceded it, or by conveying its effects after completion; some we perceive engaged in relating the event to those entering, or unable to view it from their situation in the picture; others of various ages and of differ-

ent sexes, while they give variety to the work, enable him to develop its effect by a variety of expression and action, by extending the lines productive of such sensations, or lines by a union of several parts leading the eye by their direction to the principal point of the story, or giving bulk and strength to the foreground figures. Add to these, figures repeating by their form the principal points, so as to give those richness by extending their shape, or productive of harmony by their action and expression, emanating from those of the principal actors. These remarks more immediately apply to the mental portion of the work, and of works of the highest department in the art; but many of them also may be made applicable to other branches, such as the combining of several heads for the purpose of preserving a mass of flesh color, and to prevent spottiness in the effect; or giving pleasure to the eye, by the forms taking pleasing shapes; or assisting deceptions, by lines combining to give strength and magnitude to the foreground objects, or diminished delicacy to the more distant: in short, a knowledge of the higher requisites of painting is of the greatest importance in all the departments, whether in giving dignity to portraiture, such as Titian's, or to landscapes, such as his also, and those of Annibale, Carrache, Salvator Rosa, or Nicolo Poussin. Towards gaining perfection in poetry, we find writers recommending this course of investigation. Addison says: "A poet should be very well versed in every thing that is noble and stately in the productions of art, whether it appears in painting or statuary; in the great works of architecture, which are in their present glory, or in the ruins of those which flourished in former ages. Such advantages as these help to open a man's thoughts and to enlarge his imagination and will, therefore have their influence on all kinds of writing, if the author knows how to make right use of them. Reynolds recommends, "that all the inventions and thoughts of the ancients, whether conveyed to us in statues, bass-reliefs, intaglios, cameos, or coins, are to be sought after and carefully studied; the genius that hovers over these venerable relics may be called the father of modern art. The collection of the thoughts of the ancients

which Raffaele made with so much trouble, is a proof of his opinion on this subject; such collections may be now made with much more ease, by means of an art scarce known in his time, I mean that of engraving; by which, at an easy rate, every man may now avail himself of the inventions of antiquity." He also recommends taking another view of the same figure, either by modelling it or setting a person in the same attitude; this will give the student a quick knowledge, wherein consists the beauty and character of the different great masters; or by altering it to suit his subject, such as the figure of St. Paul, by Masaccio, introduced in Paul preaching, by Raffaele, or the Sacrifice at Lystra (Fig. 33).

To conclude, I can only repeat the words of Sir Joshua Reynolds, "study, therefore, the great works of the great masters forever, study as nearly as you can in the order, in the manner, and on the principles on which they studied. Study nature attentively, but always with those masters in your company; consider them as models which you are to imitate, and at the same time as rivals, with whom you are to contend."

(To be continued.)

HOW BUSINESS IS AND WHAT OF IT.

THE SUMMING UP.

WHEN the evidence is mainly "one way," it does not take long to "sum up." So we need not add much to what about fifty photographers, from nearly all the States and territories, have said in response to our thirteen queries. Our original object in making these queries was to find out the actual condition of the photographic *business* now, the prospects for the future, and some little as to how much encouragement is given by the public to photographers.

While a few have responded rather discouragingly, the majority have expressed great satisfaction with the present, and bright hopes for the future as to business; little concern any more about "cheap competition;" encouragement as to the favor and appreciation shown them by their patrons, and a disposition to keep up prices,

and take advantage of every legitimate means offered for securing better results. Take it all in all, the outlook is most cheerful, and when we ask again, "How Business Is?" the answer comes "*good!*" And "What of it?" the answer is still "*good!*"—very good. There is more hope of making money than there has been; competition is not so angry; our patrons are better informed, and more appreciative; we are no longer ashamed to acknowledge ourselves as photographers. Our business is becoming a profession and an art, and we come in next to the minister and the doctor. Cheer up. Go to Chicago. Do your best, and you will be glad and happy and meet your reward.

WHAT PHOTOGRAPHERS SAY.

"Ho! for Chicago," I say. Let us all go; not with itching ears, but with open minds. Not with a desire to gossip and find fault, but to impart instruction and to receive it. Not to quarrel over how "the thing" shall be "run" (let the committee do all that, and thank them for it), but to improve every possible hour in chatting about photography. What you told us about "friction," at the '76 Convention in Philadelphia, was *good*. Let us *rub*, and we will all come out the better for it. "Cincinnati," by the way, gave Mr. Fitzgibbon "fits" in your last, but there seems to be justice in it. But let us forget these things. The National Photographic Association is evidently dead. Let it sleep quietly in its grave if anybody has buried it, and now hurrah for the new Association.

Yours in photography all through,

CYRUS WALLINGFORD.

[We second what our friend has said, except his remarks concerning Mr. Fitzgibbon. We cannot see how Mr. Fitzgibbon's conduct is open to criticism at all. He has done what he could to resuscitate the National Photographic Association. He visited New York especially to meet the Executive Committee, and only three of the committee met him. A call was issued, and neither his magazine nor ours was loaded down with loving responses in favor of the National Photographic Association. The Photog-

raphers no longer wanted it. It was not debt, because of the extravagance of its managers, that killed it. They never went beyond the means which they had a reasonable right to expect. The debts exist because the dues were not paid, and what is owing is mainly to them. No wonder then the Executive Committee let the thing die. Mr. Fitzgibbon could not save it. Even his small salary—nay, not even his postage bill—was paid. And so the National Photographic Association died. *Requiescat in pace*, and when you meet Mr. Fitzgibbon in Chicago have no unkind feeling towards him, for, as Secretary of the N. P. A., he has given you no real cause.—ED. P. P.]

"VIBROTYPE," is the name given by William Kurtz, New York, to photographs made "through heated air," in which he says "strongly marked features with harsh or peculiar lines, wrinkles, etc., are delicately and artistically softened, and given a natural and lifelike appearance, while the necessity for the retouching process, so destructive to the likeness, is reduced to a minimum." We are not aware that he offers his process (patented) to the trade.

"ARTOGRAPH," is the name given by Mr. William Osborne, Philadelphia, to his process for treating and improving negatives. An example was given in the Gilbert & Bacon picture published by us some time ago, only Mr. Osborne now discards "etching." The negative is coated with some easily removed, non-actinic substance, which is worked upon to any degree desired, and by which accessories, backgrounds, anything desired, can be worked in and made a part of the printing-plate. *In artistic and judicious hands* the fine effects possible are endless.

MR. E. A. GILBERT, Meadville, Pa., issues a circular with some very good testimonials as to his "Solar Retouching Process." We have only seen one example as yet. You have posted us so fully, we need not go astray in these matters.

Yours, INQUISITIVE CRITIC.

WHAT A READER OF THE P. P. SAYETH.

I am so greatly pleased with the journal, and I am sure a great many others of the

fraternity are also. It would be hard for me to part with any of the numbers, as the contents therein are from the best of photographers who stand in the highest ranks of the art; and their help is a great one for those who are seeking for more knowledge, and are trying to advance. It has given me many a good idea, and eased many a hardship that would have caused oceans of trouble and loss of time.

Now, it is no use to say, like a great many do, "I don't care about subscribing for it; why, those five dollars will do me something good far better than a subscription for the journal." When their day's work is over, they will hurry up home; and after supper; they go down town, and meet their friends; and the first thing they hear: "How do you do, William? Can you 'set them up?'" And, of course, he will not step back and say no. The first thing he knows, his five dollars are gone.

Such is the way. They will try to find out by some brother photographer, and ask him: "How does it come you make such fine negatives, full of detail, and clear and sharp?" why, he will tell them, "I take the journals, and get all the information I want." Now, if this comes to the eyes of those who have not yet subscribed, I hope it will cheer them up, and give its editor a big start. The more subscriptions received the better it appears, and may it have a welcome greeting wherever it arrives. Give it a start by sending in your subscriptions, and you will never regret it.

Very truly yours,

J. T.

Two noted clergymen, upon parting from each other, promised to exchange photographs. The more prompt one wrote, when sending his *carte* to the other, "I send this to get ahead of you." The second returned the compliment, and wrote, "I send this because I've got a head of you." See it?

ABOUT "OUR PICTURE."—Mr. Lafayette W. Seavey, the background producing artist, writes us a friendly criticism for private use, on some of the pictures which have appeared in our magazine, and closes by saying: "Really, I think only well-studied, artistic, and first-class photographs should appear in your journal."

Alas! friend Seavey, how *well* we have known, and how much we have felt, this. We are doing our best, however. We have to print thousands to serve us monthly, and that fact makes it unsafe to begin to print from less than five or six negatives. And the reasons why we cannot always get six negatives of all the best photographs made must be very obvious to every photographer. We regret the obstacles in the way of reaching Mr. Seavey's standard.

GERMAN CORRESPONDENCE.

New Improvements in Woodburytype and Alba Plates—New Emulsions—On the Sensitiveness of Captain Abney's Emulsion—Wrinkling of Emulsion Plates—Ammonia in Gelatin Emulsions—Restoring Ferro-oxalate Developer—Washing Emulsions.—Durable Qualities of Older Photography.

THE other day, Mr. Woodbury, the inventor of the relief-print, arrived here, in order to introduce a new process, which is a decided improvement upon his well-known relief-print process. In this new process the hydraulic press is not necessary any more. First, a gelatin relief is made by lighting under a negative in the usual way, upon which then a leaf of tin-foil is pressed with the help of a hot-press machine, by which manipulation the soft tin-foil is pressed with minute exactness into all indentations of the relief. The tin-foil relief is then again moulded in rosin. Turpentine and yellow rosin are melted together, placed on a glass plate and left to congeal; after which, oil is rubbed in, and the layer, with the rosin side downwards, is put on the relief, which is covered with the tin-foil, when the whole is warmed. In this way, the rosin softens, and fills all the indentations of the tin-foil. After cooling off, the layer of rosin can be removed from the gelatin relief, when it will represent the printing form, which is drawn off in the usual manner.

The process is patented here, Messrs. Prüm & Schaarwachter holding the patent for Germany. The samples obtained with the process are very promising, and very apt to give the Woodbury process a new im-

pulse, but how far portraiture will profit by it, has yet to be seen. For orders for a dozen or so of pictures, the process will not be adapted, a printing-plate being only then of value, when larger orders are to be filled; and in this respect the brotherhood will find more interest excited in the following process, also patented here, and which is easily recognized as of American origin. It is an improvement by Mr. Risse, of Dartmund, upon the Alba plates.

Risse takes raw collodion with 5 grammes cotton, 150 grammes alcohol, and 120 grammes ether, and grinds the whole thoroughly in a mortar, with 60 grammes washed and dried sulphate of baryta. With this baryta collodion the varnished iron plates are coated equally; and, after congealing of the collodion, the plates are placed in water, rinsed, and put in a solution of 3 grammes gelatin in 150 grammes water, to which is added a solution of 10 grammes chrome-alum in 50 grammes water. In this solution the plates remain five minutes, then they are dried, and the manipulation is repeated (coating with baryta collodion and gelatinizing) three times, when a very beautiful porcelain-like plate is obtained, upon which chlor-silver collodion pictures show off to the highest advantage.

Of more interest yet to the photographer, however, are all negative processes having any connection with gelatin. Several parties are trying very hard to replace the gelatin, which, in summer, does not keep long, and offers many difficulties in handling, with collodion.

As I mentioned before, I am working on a process which shows the sensitiveness of the gelatin plate, while at the same time it is as easily worked as the collodion plates; and if I did not publish the result of my researches as yet, it is only owing to the fact that I am not quite satisfied myself with the matter. In a short time I hope to have mastered the small imperfections which the process yet shows. In the meantime I have learned that Dr. Wolfram, of Dresden, has made a collodion emulsion showing the same degree of sensitiveness as gelatin emulsion. Further particulars are not yet known, neither have I had occasion yet to examine the emulsion in question, and I therefore

will have to postpone my report about the same until my next letter.

In the meantime, many new and interesting features of the gelatin emulsion have come to light. For instance, Dr. Szekeley, of Vienna, experimented lately on the process recently recommended by Abney, in regard to its sensitiveness. Abney precipitates the bromide of silver in the usual way, from a watery solution which has been treated with glycerin, then washes and shakes it well with a solution of gelatin. In regard to the sensitiveness of this solution, Abney gives no positive information, and Szekeley purposely made extensive experiments in this respect, in which he found that the sensitiveness of Abney's emulsion can be increased by being kept warm for a longer period of time. He writes:

"The bromide of silver, obtained after Abney's instruction, was put into the solution of gelatin, after having been washed thoroughly, and after the whole had been well shaken and warmed, emulsification took place almost immediately. After twenty-four hours of digestion, the plates prepared with it showed a beautiful cream layer, which had all the good qualities of an emulsion. The pictures obtained with them showed a beautiful harmony and blending of the shades, with extremely fine grain, and the sensitiveness was equal to that of wet collodion plates. I tried to increase the sensitiveness by continued digestion, and observed on the second day the same results as on the first day; on the third day the particles of bromide of silver formed little balls, and a coarser grain was formed on the plate, without an increase of the sensitiveness being observable.

"This phenomenon, which stands alone against all previous observations, appeared more marked from day to day, so that, after eight days of emulsification, the layer had a very coarse-grained appearance, while the pictures showed a pretty strong fog. The sensitiveness of the plates did not become higher through the long digestion, while, on the other hand, the intensity of the layer was increased materially. It is not improbable that, through the long digestion of the bromide of silver in a solution of gelatin in a continuously warm condition, the particles

of the brome-silver settle on the bottom, and form larger conglomerations."

From the foregoing it would appear that for obtaining emulsions of a high degree of sensitiveness, we have to fall back on the older process.

Dr. Eder, the eminent photo-chemist of Vienna, published further later observations on gelatin emulsions. He puts the reason of the wrinkling of the gelatin layer to the partial decomposition of the same; but Dr. Lohse, on the other side, has proved that quite fresh layers of gelatin are also liable to form blisters and burst, when fixed and washed. To avoid the annoyance, Dr. Lohse recommends chrome-alum, viz., 3 drops of a solution of one per cent. strength to 10 c.c. of the emulsion. Unfortunately, this addition causes the emulsion, after it has once congealed, to become almost practically insoluble, and it is therefore necessary to use up the emulsion at once, which proves to be a great drawback. Furthermore, it has been observed that the layers of such plates are not so easily penetrated by the developing liquid, so that the development takes place much slower, and the negative loses much in strength.

To guard against this defect, Dr. Eder recommends to add glycerin besides the chrome-alum, which prevents the film from becoming hard. It is best to add, to 500 parts emulsion, 5 to 6 parts of the following solution of chrome-alum:

Chrome-alum, . . .	20 parts.
Water, . . .	450 "
Glycerin, . . .	200 to 240 "

It is understood that the sensitiveness of the emulsions is almost doubled by the addition of ammonia; but then, the drawback appears, that when this addition is warmed for any length of time with the emulsion, it causes fog. In any way, with continued warming with the gelatin, productions of decomposition are formed, which exercise a reducing influence upon the bromide of silver; and I therefore always wash out the ammonia as soon as the gelatin becomes congealed, as then the gelatin may be warmed for any length of time, without incurring any danger of fog being formed.

Dr. Lohse proved that gelatin which has

been warmed for some time contains considerable quantities of free and combined ammonia; and this always occurs when no air can reach the matter.

If brome-ammonia is added to the gelatin when in a liquid state, ammonia is set free at once, even when the gelatin is only slightly warmed; while a watery solution of brome-ammonia shows only traces of ammonia. The gelatin, therefore, clearly causes a partial decomposition of the brome-ammonia.

Dr. Lohse says: "If gelatin is warmed for a longer period of time with brome-ammonia, and then silver salt is added, an emulsion is obtained which makes very good and extremely clear and brilliant negatives."

A very highly sensitive emulsion is already obtained by warming a solution of gelatin by itself for some length of time, to 30 C., and then adding brome-ammonia and silver salt. Yet it would appear that the sensitiveness of the layer is due less to the fact of the bromide of silver attaining a specially sensitive modification than to the greater porosity of the gelatin. It may be that both factors combined produce the above-mentioned result; and this assumption seems to be sustained by the fact, that when nitrate of silver is added to the gelatin, the latter becomes viscous and difficult to melt, so that emulsion prepared with it is very hard to develop and fix, even when the silver has been thoroughly saturated with brome-ammonia.

The oxalate of iron developer, recommended first by Lea, and for which Dr. Eder publishes a very simple receipt, about which I have spoken already on another occasion, is employed here very extensively, in spite of the drawback, that gradually oxalate of oxide of iron settles in it. It is therefore advisable to prepare fresh solution for every new plate.

Dr. Eder says, in this respect: "The oxide of iron which is no longer strong enough to develop pictures need not be thrown away, as it can be used very well for developing landscapes." It is, in all cases, advisable to develop landscapes first with a pretty weak oxide of iron developer, as the gelatin plates, with their high sensitiveness,

are very often overexposed, without the operator suspecting it; in which case a concentrated developer will cause fog at once. In many cases, the weak developer will be sufficient, and, if not, it is always time yet to use a strong one.

Several photographers who recently tried to manufacture their own gelatin emulsion complain that they obtained only a very limited degree of sensitiveness. This is explained by the fact that the washing of the gelatin emulsion, for the purpose of getting rid of the brome salt present, is more difficult than many experts suspect.

I took, for example, congealed emulsion, and poured water on it, which I renewed every six hours. When the water no longer showed any trace of dissolved brome-salt, I supposed the emulsion had been washed enough; but I found, after I had divided the same into very small fragments, and poured distilled water over it, that it still discharged brome metal, and this lessens the sensitiveness in no slight degree.

Herr von Schlicht recommends, as a very easy and handy mode of washing the emulsion, to pour alcohol over it several times. This expedient appears to be rather costly, without, however, being so in fact, as the alcohol can be used yet for many other purposes; as for burning, preparing the developer, etc.

Mr. Wight washes his emulsion in the way recommended by Wratten & Wainright. After the emulsion becomes congealed, it is placed in a canvas bag, through which it is strained; from that it falls in threads in a vessel with very cold water. Then the whole is poured in a sieve, so that the water runs off; and the remaining emulsion is placed again in fresh water, the whole experiment being repeated several times. In an hour, the emulsion is thoroughly washed; and, without doubt, this latter method is the best.

Of late, many doubts have been raised here in regard to the durability of the common albumen positive pictures silvered in weak baths. A veteran photographer writes me: "Twenty-five years ago, I made my bath with one part silver to five parts water, but now I take seven parts water instead. The pictures I made then have kept ad-

mirably, while the pictures obtained now with weak baths, and toned very slightly, hardly keep a year. We photographers have therefore cause to pay the greatest attention to the positive silver bath and the toning."

I believe that this fact, which has been referred to also from other parties, merits full attention, and I therefore mention it here. Of course, it would not appear to be advisable to use just as strong baths as formerly, as the albumen paper is much less salted now than formerly.

Very truly yours,

DR. H. VOGEL.

BERLIN, March 30th, 1880.

FRENCH CORRESPONDENCE.

French Photographic Society—Banquet on the Occasion of the Twenty-fifth Anniversary of the Foundation of the Society—Instantaneousness in Photography Corresponds to the Absolute Immobility of the Subject Reproduced—Photography at the Congress of Learned Societies at the Sorbonne—Popularity in France of the Gelatino-Bromide Negative Process—The Old School in no Hurry to Give up the Wet-Collodion Process—Momentary Dearth of Facts Relating to Photographic Science.

ON April 2d, the French Photographic Society had its monthly meeting, which was not as interesting as usual, as but few communications were sent in, and most of the time was spent in discussing a revision of the rules of the Society, a subject which could in no manner interest the readers of the *Philadelphia Photographer*.

Another subject that is of veritable importance for French commercial photography, took up a few minutes; it concerns the question of the legal status of photographic works. A project of law is now being considered in our Chamber of Deputies to secure, in a greater degree than by the law of 1793, artistic property; but the committee having the matter in charge has refused to admit that photography is an art, and has excluded photographic works from those methods of graphic reproductions which in its eyes form works of art, such as engraving, printing, lithography, etc.

Men very competent in art matters, among others, Mr. Guillaume, of the Institute—celebrated sculptor, former director of the School of Fine Arts, and director-general of the Fine Arts—maintained that photography was truly an art; but Mr. Guillaume was about the only one in the committee who entertained that opinion. Even Mr. Goupil, the great print editor, and who is at the head of the greatest photographic establishment in France, declared that, in his opinion, photography was not an art. It is singular to see one whose house furnishes such a large number of photographic productions show so much disinterestedness in this question of legal rights in photographic works. We would not suspect for a moment, such an honorable man as Mr. Goupil to have allowed himself to be influenced by any personal interest whatever, when he makes the declaration that has excited our surprise; and we cannot comprehend what grounds he has for depriving a photographic production of the value it may have as a work of art.

It is well to state here what Mr. Guillaume did say: "In a less degree than other arts, photography is capable of proving that she is not a stranger to art. Does not the photographer perform the work of an artist when he places his subject in the most favorable and most picturesque position, and when he studies the effect of light and shade? A simple tracing may show some signs of art."

It seems to me that in this question an error has been made, in considering photography as a method of copying reproductions of works of art already existing, rather than a method of fixing on paper a design from a composition entirely due to the arrangement of the artist. The creative side of photography seems to have been overlooked. At any rate, the great body of photographers are far from being satisfied, and are preparing to strenuously oppose this outlawry of an art and industry of so much utility, and whose services are becoming daily more appreciated. An endeavor will be made to call the attention of legislators to the regrettable confusion which is made between the artist using photographic processes on the one hand, and the photo-

graphic manipulator, properly so called, on the other.

Why should we consider lithography as a work of art, and not recognize the right of a photograph to be so called? In each of these there are the artistic and the industrial sides; and no one ever thinks of confounding the lithographic printer with the artist who has made the drawing, and who bears the name of lithographic designer.

In photography—and I see no reason for it—the designer, or, in other words, the artist and the printer are merged into one appellation—that of *photographer*. To cite an example, let us take the well-known name of Adam Salomon. This remarkable sculptor has used photography for reproducing on paper his subjects, artistically lighted and posed; and to realize his idea, he has had recourse to the printing operations of photographers. Is it just to say of Adam Salomon that he is a photographer? No; he has never ceased being an artist; and the true and only photographer was the operator, the manipulator of the process used. Notwithstanding this, Adam Salomon is mentioned as one of our best photographers. Whence this unfortunate confusion, which enters so largely in the widespread prejudice that photography is not an art? But, assuredly, it is only a trade, as it is a trade to print engravings; but the printed production, be it done typographically or photographically, is a work of art.

If we insist upon this point, it is because it interests every one; and it becomes the dignity of our photographic artists, as well as those of all countries, to classify their works, in the lowest degree if you choose, amongst those which, *legally* at least, deserve to be classified as works of art. We say legally at least, to cut short the question of the greater or lesser artistic value of a photographic creation. It is evident that this value will vary according to the talent and artistic taste of the producer; and it is possible that a highly artistic conception, graphically fixed by the photographer, should reach a very high degree of excellence—much higher, often, than is obtained by many paintings or drawings; and yet these last would incontestably be classed with works of art.

The syndical chamber and the French Photographic Society have joined hands in this matter, and will endeavor by all possible means to obtain the assimilation of the photographic art to the other arts of reproduction.

But to return to the meeting of April 2d, at which were shown the ingenious phosphorescent photometer of Mr. Warnerke, and an instantaneous stop, recommended by Mr. Stebbing.

Descriptions have already been given of the new photometer recently invented by Mr. Leon Warnerke, the principle of which rests upon a phosphorescent glimmer, more or less bright, according to the more or less intensity of the luminous source, the action which is directed on the photometer.

We had this photometer too short a time in our hands to enable us to make a careful study of it. It requires a little time to become acquainted with its working, and there are some curious facts to be observed when it is in use. Thus, does the green pellicle recommended by Mr. Warnerke, produce the extinction of the phosphorescence? Does the phosphorescent substance preserve for a long time the identical properties it had at the start? and, finally, what is the minimum strength of the sources of light whose degree may be measured by this instrument? All this is of very great interest, and we are convinced that this charming instrument will open the field to new observations of serious scientific importance. A curious fact worth noting, is the non-accumulation of the phosphorescent rays; after a sufficient time for exciting the phosphorescent matter, the photometer may be exposed for any length of time to the same luminous action without any increase of the phosphorescent light.

I do not think it necessary to further describe an instrument, the details of which have been reproduced in most of the photographic journals, with descriptive cuts.

Our excellent friend Mr. Stebbing, who is always full of ingenuity, has made an instantaneous stop from the designs of Mr. Harrison, published in the *Almanac of the British Journal* for 1880; he exhibited a photographic print obtained with this stop whilst he was on the deck of a boat in motion, at Trouville. The print represents a

crowd of people assembled on the shore; and it was with a plate sensitized with gelatino-bromide of silver, and a landscape lens, that he obtained this instantaneous effect. It is true that it is slightly deficient in sharpness, but this is owing entirely to the fact that the stop did not work rapidly enough to produce the immobility of the instantaneousness. This is truly an admirable result in favor of the gelatin negative process; that obtained by Mr. Stebbing in printing in the camera with such rapidity, and with so great a reduction of the size of the opening for the admission of light.

The night of April 3d belonged, as well as the preceding, to the French Photographic Society. About seventy of its members celebrated the twenty-fifth anniversary of the foundation of this important society. It is a serious claim to consideration to be able to count a quarter of a century of existence, especially when these twenty-five years have been so well employed. Every one knows that the Society has always kept pace with the progress of our art, when it did not do still better by stimulating improvements, by remarkable exhibitions and lectures intelligently organized. This meeting, which was extremely cordial, offered no incident worthy of record; and, if we allude to it here, it is because of our character of faithful chronicler, we owe to our readers a mention, however short it may be, of the principal facts relating to photography, and to all that appertains thereto.

Now, that we have done with the meetings of the 2d and 3d of April, we will again refer to the instantaneous stop invented by Mr. Stebbing, and referred to above. We have defined instantaneousness by immobility; and this leads us to recognize that the image of an object in motion, of a vehicle attached to a galloping horse, for instance, can only be shown in a state of complete immobility when the print has been made instantaneously. The spokes of the wheel in motion are invisible separately, and are what we might call a rotary disk; but if photography gives the motion, it will be blurred, as there can be no sharpness without the reproduction of the wheel showing the spokes distinct from each other. The true definition, therefore, of instantane-

neous photography, is that which would express, for example, a perfect instantaneous photographic impression of an object in motion—that which shows this object in the most complete state of immobility. The greater the sharpness of the print of the object in motion, the more perfect will be the instantaneousness, and, consequently, the immobility. It is useless, therefore, to seek the appearance of motion in an instantaneous impression, as it is only by bringing together in a bioscope of several instantaneous prints, taken in succession, that we can reconstruct the motion. A designer wishing to show the visible effect of a vehicle in motion would not trace each separate spoke of the wheel; but he would draw the horse, however rapid his pace, with sharply defined lines. The photographer, on the contrary, will produce a sharp picture if the instantaneousness is rapid enough; or, if any part shows a lack of sharpness, the same effect will be seen everywhere, and a general indistinctness will show itself over the whole picture. Photography, therefore, has but one way of fixing rapid movement, which consists in the reproduction of the object rendered immobile, thus to speak, in one of the phases of its motion.

The congress of learned societies from the different departments, which meets annually at the Sorbonne, the day after the Easter holidays, met last week; but, alas! photographic art or science was but poorly represented. We were the only delegate from a provincial society communicating any facts pertaining to photography.

In the section of fine arts, we proposed an article to be added to all the regulations relating to our museums, collections, archives, etc., to exclude from them any image, in whatever manner produced, that may have been printed with substances that are not indelible. We explained that prints made by the carbon and platinum processes were, in our opinion, the only ones capable of resisting the action of time, and that great imprudence was shown in enriching our collections, at very considerable expense, with works which, however useful they may be for the present, would be lost for the generations to come. The practical conse-

quence, from a photographic point of view, would be to force photography to take more heed of those printing processes which give durable pictures.

In the scientific section I explained the necessity of a mutual understanding, in view of the adoption in all chemical and heliographic laboratories, and in all astronomical and meteorological observatories, of a uniform type of photometer, equally graduated, so that observations made everywhere should be susceptible of comparison. Notwithstanding all the experiments made with photometres with oxalate of iron or uranium, I must give the preference to a change of color produced by light. It is more simple, and more easily managed, than any method based on chemical decomposition. In a summary manner I pointed out the instrument which might be made use of. I am having it made, and it will serve as a basis for discussion. An international committee may then come together and modify, as they deem best, my original idea, so that it lays the foundations for this new element of physical, chemical, and meteorological observations. If this fact has no direct bearing on industrial photography, it enters, however, into the domain of pure photographic science.

Will it be possible for the gelatino-bromide negative process to overcome the obstacles thrown in its path by the old school of wet collodion? There is ground for hope. The manufacturers of sensitized gelatin plates are becoming more and more numerous every day. A veritable emulation exists in this direction; so great, indeed, that it may be feared, before long, there will be more manufacturers than persons using the manufactured product. Up to the present time the palm belongs incontestably to our friend Stebbing, and he is so busy, so absorbed in his work, that he has given us the assurance that it will no longer be possible for him to continue his French correspondence in the *Philadelphia Photographer*. It is with much regret that we replace him here, with the hope that, after a short respite, he will take up again a pen which has proved so sympathetic to all the readers of this highly esteemed journal. And this is the way that the subject of gelatino-bromide has brought

the eventual writer of this letter to explain a change of signature, which certainly required a word of explanation. As to the hope of taking the place of Mr. Stebbing, we do not pretend to do so, neither do we desire it, but hope that he will soon take again a position which we only occupy *ad interim*. With the best intention of carrying out as completely as possible our part of chronicler, we fear that we may not have performed the task to the satisfaction of all.

But, to return to collodion and gelatin, and to the antagonism that now exists between these two sensitive films; which of the two adversaries will carry off the victory is what we cannot yet say; but we incline to the belief that there will be a fusion of their faults and qualities, and that the newcomer will not destroy the older, but that they will mutually aid each other. In those cases where gelatin offers great difficulties in the preparation, collodion will assert its rights, as well as where an excess of rapidity is an evil rather than an advantage; but gelatino-bromide will always be used where rapid preparations are desirable. There is place for both; and recourse will be had to either of these two useful processes, as circumstances may require.

There is a scarcity, at the present time, in France, of facts in the science of photography; there is a sort of torpor in the laboratories of our investigators. But this condition of things will not last; and we hope, in future letters, to be able to send you something interesting and useful. Our inventors are taking a rest, and their awakening will probably be only the more prolific.

LEON VIDAL.

PARIS, April 6th, 1880.

MY SKYLIGHT.

BY G. W. CODDINGTON.

I SEND you herewith a description of my skylight, which may be somewhat peculiar, as I have never seen or heard of one built exactly like it, inasmuch as I believe it is against all the rules and laws laid down in the various works on photography; not that the rules there laid down are not correct, but I built it to suit myself. My aim

was to build a light that could be worked and used for all or any purpose that occasion should require in the various branches of our art.

Some of you may laugh at it. All right; laugh and grow fat. I have just what I want; for I have worked under it for over six years, and, although it might not suit most operators, it suits me.

The floor of the operating-room is 24 x 28; the long side of the room runs exactly east and west; on this floor is a dark-room six feet square, and a printing-room 7 x 9. There is a space or room, 9 x 17, for sittings; also a toilet-room, into which I run the camera for groups, etc. The top-lights, of which there are two, one on the north and one on the south side, stand at an angle of about forty-five degrees, so as to slide off all snow in the winter. The sashes are 12 x 16, and at the highest point are about seventeen feet from the floor; at the lowest point, eight feet. The side-light is eight feet high by twelve feet long, and is on the south side only. At the top of the two sashes, north and south, there is a blank space three feet wide, plastered. Each top-light is divided in four squares by cross-pieces that support the sash underneath; there are four squares on the north and four on the south, eight in all. Directly under the sash, in each square, are wooden blinds 5½ x 6 feet long, made of half-inch pine boards, with a pinion in the centre; they turn exactly like our common window blinds, and are worked with pulley and string at any convenient point in the room; each blind works independent of the other, though the upper and lower ones can be fastened together, I prefer them separate; they serve also when closed to keep out the heat in the summer. The blinds on the north run horizontally across the sash, those on the south run perpendicularly with the sash rail. On the inside of the south side-light are blinds made in the same way, only operated by hand, to regulate the side-light, or keep out the sun; when all the blinds are closed it is almost impossible to take a picture. The blinds are painted white, light-pink, and light-blue, alternately. Directly under these blinds on the south top-light are white muslin curtains on spring-rollers, a curtain to each square; on the north there

are no curtains ; there also are white curtains on the south side-light.

I should have said there was a blank space of six feet from the background to the sky-light, on the east end ; the frames of my backgrounds are twelve feet high by sixteen feet long, and will take a group of twelve or fourteen without difficulty.

It will be seen by the arrangement of this light that it can be worked either on the north or south, as will or occasion requires. In cloudy or dark weather I work on the south side entirely ; in fine, clear weather, on the north, the south light being partly or wholly closed. For groups, I use both north and south lights, the light being regulated to suit the group, position of the sun, etc. The south light I use entirely for babies and children, as it works very quick in any kind of weather.

When I built this skylight I was doing a good deal of copying and enlarging from old pictures collected by agents canvassing through the country, and I suppose we all know a very strong light is required in such work, frequently direct sunlight, which can be had in the north only during a short time in the day in summer, and in winter you might as well say not at all. As the hard times smashed that business, I use it as occasion requires.

I should have stated that in the east and west end, close up in the angle of the roof, are two four-feet "bull's eyes" in windows, for ventilating the room in summer.

SOCIETY GOSSIP.

THE BOSTON PHOTOGRAPHIC ASSOCIATION.—Monthly meeting was held at the studio of Mr. J. W. Black, April 7th, 1880.

After the reading and approval of the records of the previous meeting, the attention of the Association was given to Mr. Thomas Gaffield, of Boston, who exhibited several specimens of ruby glass, showing that many different tints may pass under this name, and that different tints may sometimes be found in the same sheet of glass. He also showed some specimens of ruby, which were ground on one side; the grinding having softened and diffused the transmitted light, and corrected the dazzling

effect which has been so injurious to the eyes of the operator. According to the degree of the illumination to which the dark-room is subjected, one or two thicknesses of a medium or dark-tinted ruby glass, ground, will be found to solve the photographer's problem of securing light enough to work with ease, and cutting off enough of the chemical influence of sunlight to prevent the fogging of gelatino-bromide plates.

Mr. Gaffield then gave a brief account of the results of his experiments for seventeen years, upon the action of sunlight in changing the color of glass. He had exposed upon his roof, in Boston, some eighty kinds of colorless glass, comprising plate-, crown-, and sheet window-glass, of foreign and American manufacture; optical-glass, glass-ware, and glass in the rough metal. He had exposed, also, about seventy specimens of sheet- and rolled cathedral colored glass, including not only the main spectral colors—red, orange, yellow, green, blue, and violet—but a variety of intermediate colors, such as brown, olive, amber, amethyst, flesh color, rose, purple, etc. He exhibited specimens of colorless glass, showing changes after exposure of one day to ten years, as follows:

1. From white to yellowish.
2. From greenish to yellowish-green.
3. From brownish yellow to purple.
4. From greenish-white to bluish.
5. From bluish and other tints to darker tints of the same color.

Every specimen of colorless glass exposed a few years had changed in color or tint, except some white flint-glass, such as is used for fine glassware and optical glass. The optical glasses exposed—with one exception, which changed to a yellowish hue—changed only in a very slight degree in tint, and not enough to be witnessed by ordinary observers, or to seriously interfere with their practical value and use. In some instances where lenses seem to have changed to a yellowish color, the change may be traced to a discoloration of the Canada balsam by which the crown and flint portions of the lenses are cemented together.

Mr. Bontemps thinks that this almost unique character of flint-glass shows that the presence of oxide of lead, which enters

largely into its composition, exercises a protecting influence against the coloring action of the sun's rays.

In speaking of color in colorless glasses, reference is made to the appearance of the same when looking through their edges. In colored glass, the observations are made by placing them upon a piece of white paper, or by holding them up to the light, and looking through their surfaces.

The results of sunlight action on colored glass are as follows: The main colors, excepting violet, which is rendered a little darker by exposure, are not at all affected. Of the colors exposed, the following changes may be noted:

1. Brownish tints to a flesh color.
2. Flesh color to tints of violet.
3. Amber, olive, and purple to darker tints of the same colors.

Mr. Gaffield showed how this coloring action of the sunlight can be turned to interesting account in impressing upon colored and colorless glasses the forms of leaves and ferns, and in imprinting inscriptions and mottoes. It is a species of photographic work with sensitive glass, instead of sensitive paper, the sun showing itself a most excellent printer and developer, and, indeed, the only true photographer in colors.

A series of photographic sheets was exhibited, showing the effect of sunlight on sensitive paper under colored, colorless, and ground-glass, and with exposures varying from one minute to four hours. These showed that the colored glasses cut off the actinic or chemical influence of sunlight in the following order: red or ruby cutting off the most, then orange or green, then yellow, then purple, and at last blue, which transmits more than any other color.

Ground-glass and opal glass cut off quite a large proportion of the light, heat, and chemical influence of the sunlight.

Colorless glass, even of the clearest quality, cuts off a small proportion of the actinic influence of sunlight, and all the more in proportion as its color, as seen through the edge, shall approximate to a dark-greenish hue. But the darkest so-called *colorless* glass will cut off less than the lighted blue or any other *colored* glass sold in commerce.

He exhibited a few specimens of what he

calls "Photographic Self-prints from Nature," being self-printed leaves, ferns, butterflies, feathers, and sea mosses, many of which were artistically arranged in the form of anchors, crosses, and various other designs and printed mottoes.

He gave a few practical hints on glass for the studio and dark-room, and spoke of the necessity of procuring glass which should not become discolored on its surface by rust, or colored throughout its body by the action of sunlight. There is not so much danger of trouble from these two defects as formerly, because they have been complained of, written about, and substantially corrected in many good glass factories, at home and abroad.

After the lecture, which lasted an hour and a half, a vote of thanks was given Mr. Gaffield for the instruction given the Association. The meeting was then adjourned.

W. H. PARTRIDGE,
Secretary.

AN INTERNATIONAL PHOTOGRAPHIC EXHIBITION AT GHENT, BELGIUM.—Concerning this important event, we have received the following:

"GHENT, March 19th, 1880.

"SIR: I have the honor of addressing you with this letter, copies of the programme of the Grand International Exposition of Photography, which will take place in the month of September next, at Ghent, Belgium.

"This exposition is organized under the care of the Ghent Section of the Belgium Association of Photography, the protectorate of the King, and under the auspices of the Syndical Chamber of Industrial Arts of Ghent.

"Permit me to call your attention to the importance of these competitive trials which have been established, and hope you will give your kind patronage to this International Exposition, which we are so desirous to make worthy of the actual progress of photography in all countries.

"Receive, sir, the assurance of my great regard.

"*The President of the Ghent Section of the Belgium Association of Photography.*

"D. E. VYLDER."

Six series of prizes are offered for pho-

tographic productions, another series for albumen paper, and still another for apparatus. Full information may be had by intending competitors by addressing the able President of the Society, whose address we give above. We wish the enterprise great success; for all such do much good for photographic progress.

PHOTOGRAPHIC SOCIETY OF PHILADELPHIA.—Stated meeting held Thursday evening, April 1st, the President in the chair.

After the minutes were read and approved, Mr. Dixon, on behalf of the Room Committee, reported some improvements, which had been referred to him, completed.

Mr. Corlies brought for examination a dozen or more very fine lantern slides, made by the wet process, from washed emulsion negatives.

Mr. Browne, in speaking of the ease and simplicity of making platinotype prints, regretted that the chemicals required were so expensive, and could only be procured in New York.

Mr. Edward L. Wilson sent for exhibition a camera made by the American Optical Company, for a plate two and a half inches square, and believed it to be one of the smallest cameras ever made. Mr. Browne stated having tried it satisfactorily.

Mr. Graff brought a scenograph of foreign make, the novelty of which was the stand. The legs, being hollow, fitted in each other, making an ordinary walking-stick when not in use.

These were examined with much interest, and a vote of thanks given to Messrs. Wilson and Graff.

Mr. Bell spoke in the highest terms of Mr. Carbutt's gelatin plates, he having tried them on a most difficult subject, with great success.

After considerable conversation on these topics, the meeting was, on motion, adjourned.

SAMUEL M. FOX,

Secretary *pro tem*.

The second meeting for April was held Thursday evening, April 15th, the President in the chair.

After some routine business, Mr. Bennington, Chairman of the Excursion Committee, made a report, which was accepted;

and, after considerable discussion, the following was decided upon. The excursion to start from Reading, Thursday, June 3d, and thence, by the Union Canal, to Middletown; then to Columbia, and then take the Susquehanna and Tidewater Canal to Havre-de-Grace; the time occupied to be from a week to ten days.

Mr. Alfred Mellor was duly elected to membership.

Mr. Carbutt exhibited a number of photographs of interiors, made on his gelatin plates, among them a series of views in St. Stephen's Rectory, by Broadbent & Taylor, which were very successful.

Mr. Pancoast brought an instantaneous negative of a wet view, made on a gelatin plate.

Mr. Sartain introduced Mr. Reed, who exhibited a large number of etchings on collodion films, executed by the late James Hamilton.

Some very excellent platinum prints were shown by Mr. Browne, who remarked that considerable experience was required to hit the right depth in printing.

On motion, adjourned.

D. ANSON PARTRIDGE,

Secretary, 1815 S. Fifth Street.

CHICAGO PHOTOGRAPHIC ASSOCIATION.—Owing to circumstances beyond control, we are unable to get our usual full report from Chicago in time for our current issue. The usual meeting was held, and the use and management of albumen paper was largely discussed, many points of interest and value being given.

The subject of a change of location for the meeting-room was also discussed considerably, and ended in a resolution that the meetings hereafter be held in the Chicago College of Pharmacy building.

The coming convention of the fraternity also came in for a large share of the evening, and a meeting of the committee was appointed for April 24th. The proceedings of that body we give below. Doubtless the Chicago members of the fraternity are doing their most wonderful best.

THE PHOTOGRAPHERS' ASSOCIATION OF AMERICA.—We regret that the Committee of Affairs could not fix the date of the

coming convention in time to announce now. We give below all the news up to the 28th inst., when we go to press, as follows:

A meeting was called for Saturday evening, April 24th, at Mr. Copelin's gallery, to further shape the affairs of the coming convention, and, briefly, here is the result, which you will receive in detail from the Secretary. J. F. Ryder, Cleveland, Ohio, was elected President, and a list of vice-presidents; one from each State, the Canadian Provinces, etc., with the exception of Illinois, which has three, was confirmed. The reason for making the list for this State larger, was to get a working committee; the names selected being Messrs. Gentile, Hesler, and Mosher, who will constitute an Advisory Committee, acting with the officers elect. Treasurer, H. Rocher; Local Secretary, A. J. Copelin. The name, *Photographers' Association of America*, was confirmed, and the voting membership to be none but those pursuing the practice of photography. The dealers, manufacturers, and those serving the craft, will probably be provided for as

associate, honorary, or auxiliary members, without voice in the deliberations of the Association. In fact, it is to be the work of *photographers*. The date of meeting is not settled, and I presume the time decided on will prove favorable to the majority. Let us all do what we can to help them.

Truly yours, in haste,

G. A. DOUGLASS.

We congratulate our friends in Chicago on their most excellent officership. They are sure to win a large attendance, provided a seasonable time be fixed—not in the hot and unhealthy days of August, when everybody, with his wife, is taking his necessary rest.

TO PREPARE PAPER NEGATIVES.—The paper is covered with collodion containing an iodide, floated upon a silver bath; washed, and floated upon a tannin solution. In order to render the paper negative transparent, it is dipped into a solution of castor oil thinned with alcohol.

Editor's Table.

IN our last issue, we displayed Mr. J. C. SOMERVILLE'S advertisement of his new SCHOLTEN'S Improved Head-rest Clip. We would again call attention to this very excellent appliance. It has all the virtues which go to recommend an article for real, practical use. It is simple in construction, the whole movement being governed by two convenient thumb-screws; it can be placed in a numberless variety of positions, to suit any subject; it is small, light, and can be attached to any style of head-rest; and last, but not least, in these hard times, it is cheap—within the reach of any purse, however limited. Photographers, try it. You are sure to be pleased with such a convenience.

THE leading newspaper of Chillicothe, Ohio, gives a very lengthy and flattering notice of the new photographic rooms of Mr. F. A. SIMONDS, who, after a career of over twenty years in that city, has lately fitted up and moved into his new gallery. From the glowing description, he has shown extreme taste and judgment in fitting up

his place; and it must be a real pleasure to his customers to be served in such elegant apartments.

WE have received, from Mr. HIRAM J. THOMPSON, 259 Wabash Avenue, Chicago, his full, illustrated catalogue for 1880—a wholesale price-list of mouldings, mirrors, chromos, engravings, and various other fancy articles so useful in household decoration. The catalogue is in the form of a 48-page pamphlet, giving full descriptions of all articles, many of them illustrated with fine engravings, to further assist the purchaser. There are also full instructions in regard to ordering and shipping goods.

SCOVILL MANUFACTURING COMPANY (W. IRVING ADAMS, agent), Nos. 419 and 421 Broome Street, New York, have issued circulars notifying their patrons of the change in prices of ferrotype plates, which are advancing with the higher prices in iron. A quotation is given in their circular, from one of the foreign market reports,

dated Cardiff, Wales (which is one of the largest iron markets in the world), in which a *continued* advance in value on iron is confidently looked for. With such a prospect before us, it would seem advisable for ferrotypers to secure their spring stock of plates at *once*, and thus save themselves the risk of additional charges.

Notice is also given that the two brands known as "Union" and "Centennial" (10 x 14) are withdrawn from the market, and are no longer made.

Mr. W. KURTZ, Madison Square, New York, sends us some samples of portraits made by his new patent method, whereby an additional softness is produced in the picture, and the necessity for retouching very greatly reduced. The result is, of course, a saving in time, and a far more natural effect in the portrait.

The chief principle in Mr. KURTZ's method is keeping the air in a state of vibration between the subject and the camera during the time of exposure. We are expecting soon to see further specimens made in this way, and shall then have more to say on the subject. Mr. KURTZ's work is too well known to need any praise from us, but we hope ere long to give our readers another positive proof of his ability.

A VERY nice specimen of Artotype printing, cabinet of a lady, is received from Mr. R. H. FURMAN, Rochester, N. Y.

FROM Mr. PRITCHARD HANDSOME, Louisiana, Mo., several cabinets. The background used in one of these pictures was painted by Mr. HANDSOME himself. It represents a fancy oriental garden, and the perspective is very good. Another of these pictures represents the corpse of a woman floating on the sea. It was made from life (a living subject), and the waves etched in. The effect is very striking and weird.

MESSRS. HOWSON & SON, Philadelphia, Pa., engineers and solicitors of patents, have issued a complete little book of over one hundred pages, containing, in a concise form, a large amount of information on the subject of applying for and obtaining patents in this country and in Europe.

The firm of Howson & Son was established in 1853 by the present head of the house, Mr. H. Howson, and for over a quarter of a century their business has continued to steadily increase. Mr. H. Howson was counsel in the great "Bromide Suit," which all will still remember, and it was mainly through his efforts that the photographers

of to-day are not compelled to pay a burdensome annual tax.

One of the *attractive* features of this book is the variety of initial cuts, suited to each subject, and very well executed.

Mr. G. P. PATTERSON, Lebanon, Ohio, receives a very flattering notice in the Lebanon paper of his ability as a photographer, as displayed in a handsome case of photographs which he has recently caused to be placed in a conspicuous position in the city post-office.

Mr. RANALD DOUGLASS, Washington, D. C., requests us to call attention to his advertisement offering to make negatives for the trade, of Washington and vicinity. Mr. DOUGLASS has made a number of negatives for us of the public buildings in that city, which have proved entirely satisfactory, and we can, therefore, recommend him and his work most heartily to our readers' notice.

Mr. M. WOLFE, Dayton, Ohio, still continues to delight appreciative audiences with his fine stereopticon exhibitions. His latest entertainment was given before the First Baptist Sabbath School of that city. The lecture was given by Rev. Mr. COLBY, a description of his European tour of a year ago. By the help of Mr. WOLFE, with his lantern and slides, the lecture was rendered delightfully real, and the audience dispersed with a feeling akin to that of travellers returning from an enchanted journey.

We have received from Mr. WELL G. SINGHI an excellent cabinet of himself, also one of his *new boots*, clock, etc. From Mr. T. M. V. DOUGHTY, Winsted, Conn., several very excellent card samples of his work; among them a portrait of himself. Two cabinet vignettes of young ladies from Mr. JACKSON, Owego, N. Y.

We were agreeably surprised the other morning on receiving a large collection of cabinet photographs from Mr. JULIUS HALL, Great Barrington, Mass. These samples show the careful and conscientious hand of the rising photographer, such as Mr. HALL is and has been for many years past. We can compare these samples in memory with others of a few years ago, and feel real pleasure in the marked advance of the present over the past.

Mr. HALL is a careful, painstaking photographer, always on the lookout for improvements in our art, and ever ready to at once adopt every really good thing that tends to advancement.

APPLE BLOSSOMS.—Our next issue will be em-

bellished with an illustration bearing the above title; negatives by Mr. WALTER C. NORTH, Utica, N. Y. It represents a pretty group of children playing under the fragrant shade of an apple-tree in full blossom. The background, containing the tree, was painted at considerable expense for Mr. NORTH, by Mr. SEAVEY, of New York, Mr. NORTH desiring to use it for commercial as well as pictorial purposes. He offers to make negatives of it for the trade, in any size up to 8 x 10 inches for use in printing in fancy backgrounds, mats, and panel pictures. For further particulars, write to Mr. WALTER C. NORTH, 56 Genesee St., Utica, N. Y.

WE have received from Dr. E. HORNIG, Vienna and Leipzig, a copy of the *Photographisches Jahrbuch*, 1880, issued by the editors of the *Photographisches Correspondenz*. The book is in neat binding, pocket-form, and would be a valuable addition to the library of those who can read German, and by such the book can be procured from Dr. HORNIG by sending fifty cents. It is illustrated with a lithdruck portrait of Dr. S. TH. STEIN. It is full of valuable statistics and information of all sorts in regard to patents, laws relating to photography, photographic publications, formulæ, tables of weights and measures, lists of photographic societies, stock-dealers, manufacturers, etc. We would advise our German readers to secure a copy.

THE WOODBURY PROCESS MADE EASY.—If our readers will turn to Dr. VOGEL's correspondence, they will notice his reference to some valuable improvements which Mr. WOODBURY has lately made in his beautiful process, several samples of which he has kindly sent us. What Mr. WOODBURY's expectations are in the future we do not know, but we will certainly keep you posted on every new development in this charming branch of our art.

Mr. THORS, one of San Francisco's new photographers, has favored us with a number of cabinet cards, mainly of theatrical subjects, which are exceedingly fine. Mr. THORS has been in business for himself but eighteen months, and the pictures before us certainly give promise of a bright future for him. His positions and compositions are artistic; the lighting tasteful, and in all technicalities of manipulation and finish—all through—they show the work of one who understands his art, and who practises it with feeling.

Not old books, but new ones, are offered very cheap in our advertising pages. Please see the

list of bargains. One dollar invested may save you ten dollars that might be wasted.

WAYMOUTH VIGNETTE PAPERS are selling by the thousand. Read Mr. DE SILVA's notes about them on another page.

A NEW CLAIMANT FOR PUBLIC FAVOR.—The Megatype (literally large picture) appears in our advertising columns this month, to which we direct the attention of those interested.

TESTIMONIALS.—"Volume 2 of *Lantern Journeys* is received, also the January number of the *Philadelphia Photographer*. I have taken every volume except the first and second, and intend to take it as long as I remain in the business. When I first took it, I thought it rather expensive; but it is the best paying investment any photographer can make."—H. W. IMMKE. "Mosaics for 1880 received. Accept many thanks. It is certainly something you may feel proud of; and the journal is like a visit from an old friend, like friendship and old wine—gets better with age. Your programme for 1880 is worthy of great effort on the part of old subscribers to increase its circulation. I shall write to at least a dozen photographers to take it."—M. P. BROWN. "Mosaics arrived two weeks since. Accept thanks. It is just full of good for the photographer; and those who do not read it—well, they do not know how much real good they miss. I wish you and all your publications abundant success."—GARVEY DONALDSON.

CENTENNIAL VIEWS.—As our readers have seen by our book circular we have again offered these views as premiums with cash subscriptions for the journal. Many messages of thanks and pleasure have come back in return for them, and many orders have grown out of these premiums. Finer subjects never came before the camera than many of the beautiful articles photographed by us during the late Exhibition. Photographers have but to show these views to their customers and they are sure of ready sales. Each one should have a sample lot in his show-room, and he would find them a good investment. Here is what one subscriber says of his views:

"The views are extra fine, and although we had four dozen before, none are like the ones you sent. WELL G. SINGHI."

PART 3 of the *Photographers' Bureau of Information* is received from the publishers, Messrs. DOUGLASS, THOMPSON & Co., Chicago, Ills.



WALTER G. NORTH,

UTICA, N. Y.

UNDER THE APPLE BLOSSOMS.

T H E

Philadelphia Photographer.

Vol. XVII.

JUNE, 1880.

No. 198.

Entered according to Act of Congress, in the year 1880,

By EDWARD L. WILSON,

In the office of the Librarian of Congress, at Washington, D. C.

OUR PICTURE.

THE charming little group of children at play "under the apple-blossoms," which we present to our readers this month, seems to us especially appropriate to the present season, when nature in her childhood is decked in her fairest attire of tender leaf and scented blossom; when

"Music, sweet music
Cheers meadow and lea;
In the song of the blackbird,
The hum of the bee;
And loud, happy laughter
Of children at play,
Proclaims how they worship
Spring's beautiful day."

As we look at this picture, we seem almost to hear the "hum of the bee," gathering honey from the fragrant blossoms; and in the distant meadow, one can well imagine the blackbird is whistling his spring lay. Childhood is ever called the springtime of life; and, indeed, the little ones *are* the sweetest blossoms that deck life's pathway. They are so happy, so care-free; it rests the world's weary heart to watch them at play, while their dear voices are the sweetest music to our ears.

"Let them exult! their laugh and song
Are rarely known to last too long.
Why should we strive, with cynic frown,
To knock their fairy castles down?"

Ah, no! let them be happy while they are young. The trials of life come soon and fast enough; the burden and heat of the day must be borne by each one alone. *Now* tender hands can guard and cherish, warding off much of harm; *then* we can only look on and wait.

We must thank our artist for this sweet picture. It does us all good to look at it; and, in the words of another poet, we can truly say:

"They are indeed a lovely group
Of happy, sportive creatures,
With all of beauty that can dwell
In earthly forms and features,

"With minds of childish innocence,
Unsullied and unbent;
Though living in a world of sin,
They knew not what sin meant.

"There was a strong, endearing spell
Around their artless ways;
I feared no treachery 'neath *their* smiles,
No falsehood in *their* praise."

Of course, there is the other side of childhood, that is full of the mischievous pranks to which they are so prone, and whereby they sometimes become a source of great trial to parents and teachers. And yet, with all their faults, we love them still.

Charles F. Adams puts this most delightfully in a little poem, in which the humorous and pathetic are charmingly combined.

The sorely-tried father of "Leedle Yawcob Strauss" finishes his soliloquy in the following words:

"I sometimes tink I shall go vild,
 Mit sooch a grazey poy,
 Und vish vonce more I gould haf rest,
 Und beaceful dimes enshoy;
 But ven he vas ashleep in ped,
 So quiet as a mouse,
 I prays der Lord, 'Dake anydings,
 But leaf dot Yawcob Strauss.'"

Here we have a group of these little heart-winners, who have endured the trial patiently of sitting for the large number of negatives required to print our edition in a short space of time, that it might be in season. We thank them for this. They are good little subjects, and our careful photographer, Mr. Walter C. North, Utica, N. Y., has done his utmost to secure us a pleasing picture of them. It is his composition, and he has expended a great deal of thought, time, and money upon it. The greatest helper to the picture is the original and beautiful background, which gives the name we have chosen to the whole—"Under the Apple-blossoms." It was painted for Mr. North by L. W. Seavey, Esq., and, although it has here helped us to this fine effect, yet the real advantage and charm of it is by no means fully shown. Owing to the large quantities we need, and the expense of them, we cannot undertake double printing and masking; hence could not show all that can be done with such a background-negative as this. The background, Mr. Seavey tells us, was really painted for double printing, and for groups and single figures he should have painted differently. This was done in order that other photographers might share its advantages with Mr. North, which he kindly offers. - He has made from the original design, with a well made up and harmonious foreground of plants, flowers, etc., negatives of the following sizes: 8 x 10, 11 x 14, and 14 x 17. These can be used for many lovely effects, which will suggest themselves to any ingenious printer. We have space to describe but one style.

Take the negative of a group of children, like these, for example, with a plain background, and vignette the print. Now lay

on a cut-out over the printed figures, circle or oblong-panel in shape, and print in the border from the blossom negative. When nearly done, open the frame carefully, use one hand to hold the print down, and with the other remove the cut-out or mask that hides the figures, and then, with a handkerchief or cardboard attached to a piece of glass, carefully move slowly over the figure, and let a little of the surroundings in the blossom negative print over the edges of the outline. A pretty effect is thus obtained, and there is scarcely any end to the variety of ways that an ingenious printer can devise.

Mr. North makes both vertical and horizontal negatives—the one showing the whole background design, and the other but little more than the tree and branches. See his advertisement in "Specialties."

Many photographers want just such a thing, and they can now secure it at a comparatively small expense. Those who wish to see some of the "fancy" effects obtainable will, by sending one dollar to Mr. North, receive sample prints revealing the whole story. Mr. Seavey says of them: "They are nice examples of the *taste* that can be displayed."

Had we had more time to consider the matter, we believe we should have copied down some of Mr. North's "double" pictures, instead of using these negatives. They are very pretty this way, however, and we have shown you how you may far excel them in your own studio.

Use them for your child-pictures, and you will make them feel like the antique G. W., who said he "would rather tell a thousand lies than cut down one apple-blossom tree" like this.

"The apple-trees with bloom are all aglow,
 Soft drifts of perfumed light,
 A miracle of mingled fire and snow,
 A laugh of Spring's delight."

The prints were made at our own rooms, on Gennert's importation of paper.

THE Chicago Convention will be the photographic event of the year, and everyone who can should be there.

OBITUARY.

HENRY M. MCINTIRE, M.E.

OUR readers will share our regret at having to announce the sudden death, by drowning, of one of our most valued and valuable contributors—Prof. Henry M. McIntire, M.E., author of “The Outlines of Chemistry” (a series of papers which appeared in our Vol. XV) and of “The Theory of Photography” (another excellent series, given in our last volume).

The circumstances of his death, which occurred Monday evening, April 26th, are these:

The young men employed in the office of the Vulcan Steel Works, at Carondelet, Mo., one of whom was our esteemed friend, had organized themselves into the Keystone Rowing Club; and at half-past five on the evening named he, with three others, started to row up stream to their lodgings.

The river was running high, owing to the heavy rains on the previous night. About thirty feet from the place where the boat was launched, two barges belonging to the Sectional Dock Company were anchored. In order to get out into the river, it was necessary to row around the upper end of these barges. In doing so, the boat was caught in the swell of a passing steamboat, which threw it into the current, and it was carried with some force against the end of the barge next to the shore. The suction of the water passing under the barge caused the boat to capsize. The whole party managed to catch hold of the bottom of the boat; but the current against the bodies of the four caused the boat to turn over again, and, in turning, it was carried under the barge. Two of the party were rescued after much effort, but, alas! the others were less fortunate; and one of these was the subject of this sketch. Every effort was made to recover the bodies, and, at last, with success; and the body of our friend was brought to his home, at Easton, Pa., and placed in its last resting-place on Thursday, May 6th, Rev. W. C. Cattell, D.D., President of Lafayette College, and Rev. Frank E. Miller, of the First Presbyterian Church, and Rev. T. C. Porter, D.D., Prof. of Botany, Lafayette College, officiating.

As to the life and work of the deceased. He was born at Easton, Pa., August 7th, 1856. His education was acquired in the public schools of Easton, graduating from its high school in 1873. He entered Lafayette College in the fall of 1873, in the mining-engineering course, graduating in 1877 with the degree of M.E. The next year he spent in the laboratories of the college, as one of the assistants of Prof. T. M. Drown. At the same time he continued his studies; applied for and received the degree of A.C. In the fall of 1878, he accepted a position as chemist in the laboratory of Prof. T. A. Edison, the electrician, at Menlo Park, N. J., where he remained for several months. In the fall of 1879, he became chemist to the blast-furnace department of the Phoenix Iron Works, at Phoenixville, Pa., which position he resigned, to accept a similar position in the Vulcan Steel Works, at Carondelet, Mo., a little more than three months before the accident.

Of his character we can only say that he endeared himself to all with whom he came in contact. He was noble, honorable, and generous, and, as we had opportunity to know, was manly and conscientious to a degree. He was a member of the American Institute of Mining Engineers, and a Fellow of the American Chemical Society.

Most of his writings appeared in this magazine, as named above; and he translated some German articles for the *St. Louis Practical Photographer*. Some months before his death, we had arranged with him to prepare a dictionary of photographic chemistry. What progress he had made we do not yet know. We trust it may be in shape for publication presently, as a monument to him.

Those who have followed him in his important contributions to photographic literature will join us in testifying to the satisfactory clearness, terseness, and practical value of all he did in that line. We looked upon him as a most promising helper in our art, and sadly deplore the loss we all must experience in his untimely death.

He was beloved by all who knew him, and made many friends wherever he went.

J. C. POTTER.

Still another friend has been taken from us. Many of those who were in the habit of attending upon the conventions of the National Photographic Association must have personally known that kind, genial, companionable gentleman and earnest photographer—J. C. Potter, of Elyria, Ohio. He, too, is dead. He was once an active member of the Cleveland Society, and a great helper when the 1870 Convention was held there.

We gather the following facts from an Elyria paper kindly sent us, and can second all it says in honor of our once good friend and long-time subscriber.

"J. C. Potter, the well-known photographic artist of Elyria, died at his residence last Thursday, April 29th, after a prolonged illness of lung disease; buried May 2d.

"The deceased was born in Sheffield Township, Lorain County, August 4th, 1825, and was in the fifty-sixth year of his age at the time of his death. He spent the early part of his life at Amherst; and when 'picture-taking' by the Daguerreotype process came into vogue, he learned the art, and in a short time became a proficient artist. He was for a time an itinerant in that business, moving from place to place in a car fitted up for that purpose. In 1858, he located permanently in Elyria, and practised his chosen calling with a high degree of proficiency and success, always keeping up with the improvements of the art. Several years ago, his health failing, he sold his gallery, and made a trip to Montana, where he expected to recruit physically; but after a sojourn of six months, he returned without being benefited. Since then he has been variously employed at different callings, as his declining health and circumstances would permit.

"Mr. Potter was a man of warm social qualities, and was an active member of several benevolent orders, who will miss his departure. In his religious and political views, he was inclined to liberality and toleration. Being honest and sincere in his convictions, he permitted like privileges to others as he desired to enjoy himself.

"He leaves a wife and five children to mourn his departure, the youngest being eleven years of age."

HOW TO WORK PAPER SUCCESSFULLY.

BY H. A. WEBB.

(Continued from page 136.)

THE reason why paper that is kept slightly damp (and I mean by that just sufficiently damp to be pliant and easily worked) prints stronger and richer than when perfectly dry, can be accounted for in this way: when the sensitized paper containing albumenate, chloride and nitrate of silver is exposed to the action of light, a subchloride is formed and chlorine is liberated; now, if the paper is slightly damp, the chlorine can more readily unite with a portion of the free nitrate of silver to form chloride of silver, and so a fresh supply will be formed for the light to act upon, and consequently there will be more silver to make up the image; as the light acts more rapidly in the shadows, it is here where we get the greatest supply of fresh chloride of silver, and necessarily more contrasts, and that is what is needed to obtain vigor and brilliancy.

In printing, no rule can be given, as that will have to be governed by the paper, the kind of toning-bath employed, and the extent to which the toning is carried; this can be learned alone by experience. I use a carbonate of soda toning-bath, and carry the toning pretty far, and so need to print quite strong.

If the paper prints vigorous, with a clean, and what we might call a metallic, bronze in the strongest shadows, we may feel quite certain that, with equal attention and care in future operations, we shall obtain satisfactory results.

When through printing we prepare the acid water, which is made slightly warm in cold weather (just tepid), taking one ounce of acetic acid to about one gallon of water; the prints, without any previous washing, are placed, one by one, in the acid water, care being taken to see that they are completely covered, and that they do not stick together; it is best to turn them over once after they are in, the same as when fixing. In about five minutes they will turn red; if the water is cold it may take longer, and for this reason I advise tepid water. If the prints turn a bright cherry color immedi-

ately upon placing them in the acid, it is an indication of the silver being too weak; and, on the other hand, if they take a long time, or refuse to redden up properly, quite likely the silver solution is too strong.

The prints are removed from the acid water and washed in two or three changes of water, or until the water ceases to have a milky appearance.

The toning-bath, if a new one is to be employed, should be made a couple of hours before use, and as follows: A sufficient quantity of water, which will be governed by the amount of work to be toned, and to this is added a portion of the gold solution, containing about one grain of chloride of gold; make very slightly alkaline with solution of carbonate of soda (washing soda), litmus-paper being used for testing, and I have found a small pinch of common salt an advantage; when commencing to tone, a fresh supply of gold solution is added, and made alkaline as before, being careful not to add too much of the soda solution, or there will be a tendency to blister. It will take from one to one and a half or two grains of gold to the sheet of paper; this cannot be calculated closely, as so much depends upon the character of the work, and the extent to which the toning is carried; if the greater portion of the work is vignettes and not toned far, then it may be safe to calculate one grain to the sheet, but if the bulk of the work is plain, with heavy shadows and dark grounds, and the toning carried until the prints are purple, then twice that quantity, or nearly two grains to the sheet, may be used.

The toning should be carried a little further than is wished when the prints are finished; but as a rule they should be removed from the bath when they begin to be blue in the middle tint, but take them out while there is still a little red in the strongest shadows. If the silver bath is too weak, the prints will look measley, and tone up gray and flat, instead of a rich purple and vigorous; if the silver is too strong, they will tone slowly, and if they refuse to tone, and look weak and spotted, and seem just to bleach out and turn yellow, or of a pinkish tint in the lights, then, no doubt, the silver bath is acid, or not sufficiently alkaline for the paper.

The toning-bath I have found to work better after it has been used a few times, so I keep it, pouring it back in the bottle, and the next day decanting off the clear solution, and the balance thrown in with the waste toning-bath, afterwards to be precipitated with iron solution. I know the theory is that with an alkaline toning-bath the gold will be all thrown down, but in practice I do not find it so, for even after standing several days without using, I have found there was still sufficient gold held in solution to tone plain paper prints, and for plain paper prints I now always use the old bath without any addition of gold, toning those first. The fixing-bath may be made of one ounce of hypo to eight ounces of water, and the prints allowed to remain in for ten minutes, keeping them moving; they are then placed in salt-water to prevent blisters, about a pint of salt to a gallon of water, and left in this from five to ten minutes, and then removed to fresh running water to receive a thorough washing.

A word of caution here about burnishing may not be out of place, for I have seen the most beautiful prints spoiled by using the burnisher too hot, the tones completely ruined, most likely to occur if the prints are too damp when burnished.

In a few words, let me recall some of the points to be remembered in order to obtain success in printing. Keep the paper damp before silvering, so that it may take the silver uniformly and quickly, and also as a guard against one source of blisters. Always keep a sufficient quantity of solution, and never think of starting to silver without being certain of the condition of your bath both as to strength and alkalinity. If you would have your paper print rich, do not allow it to become too dry before printing. If you would have your prints resist the atmospheric influences as much as possible, do not be afraid to tone them well. If these requirements are carefully attended to, success will follow.

SEE the offer of "Book Bargains" in the advertising pages. Cheap information as well as good.

NEW PHOTOGRAPHIC MAGAZINE.

JOURNAL DE L'INDUSTRIE PHOTOGRAPHIQUE. *Organe de la Chambre Syndicale de la Photographie.* Gauthier Villars, Publisher, Quai des Augustins, 55, Paris. A monthly journal. Price, seven francs per annum.

This is the title of our newest candidate for photographic favor, two numbers of which are before us. The first is devoted to the publication of the minutes of the meetings and the documents emanating from the Syndical Chamber of Photography, a recently formed Parisian photographic society. The second, containing divers articles, written by the editor of the journal, treats of questions of legislature, jurisprudence, and administrative regulations belonging to photography; gives the programme and the rewards of photographic exhibitions, and a list of French and foreign patents. In a word, it is a compendium of all the facts and documents, the knowledge of which may be useful to photographers in the prosecution of their business.

The Syndical Chamber, of which it is the organ, is devoted, in brief, to anything that may contribute to increasing, in whatever direction, the domain of photography. It is the intention of the projectors to extend their influence and usefulness everywhere, by means of correspondents from all parts; thus serving as a means of creating in photographic art a universal freemasonry, by establishing a lasting and substantial band of unity between all the members of what it is hoped will be a general syndicate.

Any one, upon payment of seven francs, may become a member of the Syndicate, and receive their magazine free.

THE NEW WEDGE CAMERA-STAND.

BY R. E. WOOD.

I HAVE a new camera-stand, different from any ever made before. I know it is, because it is the child of my own brain, and the work of my own hands. I was fooled once, however, by going to the Patent-office with a concern already there; but the like

of this is hardly in existence. For simplicity, little cost, and ease of manufacture, it cannot be excelled; neither can it be surpassed for ease and comfort in working. It is as good for the purpose as any ever made, however many cog-wheels and much complicated machinery they may have; so simple any half-way carpenter can make it. The materials are only lumber, nails, and a two-foot strap. Consequently, they are to be had in almost any out-of-the-way place; that is, those actually necessary to put it in working condition. Screws, butts, mouldings, paint, and ornaments can be added at pleasure.

It took me only one day and a half to make mine ready for the gallery, minus the paint. I found three different photographers, last summer, who wanted just such a machine, back from the principal focus of business, where freight was from two to three cents a pound; and that, added to the first cost of a good stand (from \$20 to \$30), caused them to try to get along as well as possible with the old, rickety tricks of machines that ought to have been in the fire long ago.

To meet such wants, I give a concise description of my instrument; and if any brother artist is benefited thereby, I will be satisfied. If desired, it can be made triangular, and have but three legs. It would be a little more work, and the carpenter would need to be somewhat more skilful than for the square pattern.

Take two pieces of lumber 2 inches thick, 6 inches wide, 2 feet 4 inches long. From what is to be the left hand, back, upper inside corner of one of these pieces, rabbit out a wedge-shaped groove, one inch square at the top, coming to a point a foot below (see Fig. 1, A). Five inches from the top draw a line across the groove, and take it for the centre of a V-shaped mortise, three-eighths of an inch deep, one and a half wide at front, and three at the back (Fig. 1, F). Prepare a hard wood wedge (hickory is preferable) to fit the wedge groove, only a little shorter (E),

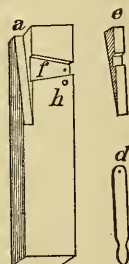
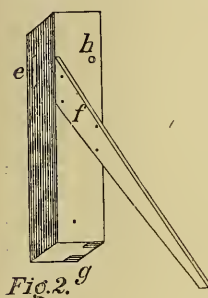


Fig. 1.

with a notch large enough to let in loosely the hickory or other strong wood lever, *D*. This lever should be twelve inches long, one and one-fourth wide, three-eighths thick. Place the wedge in its groove. Across it lay the lever, in its mortise, and bolt through five inches from top, near front of the mortise; thus having the lever in the notch of the wedge, so that by pressing the lever handle, the face of the wedge projects out from the level of the plank, and will press on the post that is to be, and hold it at any desired height. Next, to the edges of these planks nail or screw two other pieces, eight inches

wide, one and a half thick, and the same length, first having cut a mortise through one for the handle of the lever, *D*, to move in (Fig. 2, *E*). We now have a square box or tube four by six inches on the inside. On the inside of the two front corners



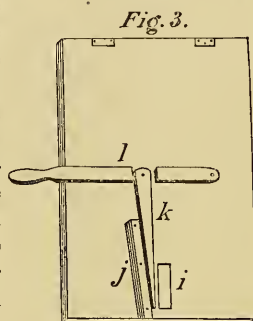
place pieces one by two inches, the length of the tube (Fig. 2, *g*), which will leave one space four by four inches, the other two by two inches; the one for the standard post, the other for the belt that is to be in front of it.

For the legs, take four pieces four inches wide at one end, tapering to two at the other; one and a fourth thick. Nail or screw one of these to either side of the tube, commencing six inches from the top, bringing it across at an angle of about sixty-five degrees (Fig. 2, *F*). Trim the corners, and set the embryo stand on its legs.

Next take a four by four piece, two feet six inches long. On one end nail the bed-board, about twelve by eighteen inches, or of any size suitable for the camera-box it is to carry. Underneath, to the sides of the post, nail a couple of strips two inches wide, for the firmer support of the bed-board. To the front lower end nail one end of the two-foot belt, which should be a firm, thin, stout piece of leather. Raise the wedge-lever, and put the post to its place, inside the tube, with the belt in the two-inch square space. Six inches from the top, and two and a half

from the front (Fig. 2, *H*), bore a three-quarter inch hole clear through for the crank-shaft; a piece of an old hard-wood broom-handle, one foot long, is just the thing. On one end put a five-inch crank, with handle; then put the shaft in place, draw the belt over it, fasten with tacks or small screws, cut off the surplus leather, and the raising and lowering gear is complete.

The next movement is to mortise, through the rear of the bed-board, a hole one inch by three (Fig. 3, *I*). On the left of it nail a cleat, at an angle to correspond with the wedge, *K*, which make and bolt to the lever, *L*, near the middle, and then bolt this le-



ver to the bed-board, somewhat to the right of the centre. Now another board for the top, same size as the bed-board. Under each end nail a cleat an inch thick; then hinge to the front of the bed-board with the remaining piece of strap, if very economical; or, if they can be afforded, hinges will do as well. Near the back end, on the under side, nail a post six inches long, one by two inches square, so it will work in the mortise of the bed-board, against which the wedge presses to hold the hinged top at any angle. Nail some thin strips on the front and edges of the top board, with their edges above its level, to keep the camera from slipping off, and the thing is complete.

I prefer to incline the camera with the right hand, while the left works the wedge-lever; but if desired, arrange another little crank, and belt to this post similar to that on the main standard. This, however, is wholly unnecessary, as it can be brought to any angle with the utmost ease.

THE ROBINSON TRIMMER is to be reduced to about one-third its former price. It is the best trimmer in existence. See new advertisement.

NOTES FROM A TRAVELLER.

BY I. B. WEBSTER.

INCLOSED you will find a card which tells you what I am up to, and at the same time will give you proof that I am in a position to back up the points I am about to make with the best proof. I visit towns and cities, I see what the photographer is doing in all of them, and, unless I mention a name, neither you nor your readers must accuse me of "personalities." "Generalities" is my theme, and as such I give you the items.

To begin then, I am prepared to say that as poor work is delivered to patrons now as was the case twenty years ago. You don't believe it? Just you go where I have been, and see what I have seen, and you would doubt no longer. I have seen the itinerant in his tent; I have seen him in his rented room, upon the "hill-top" and in the valley; in the barn, in the house, on the porch, and in the blacksmith shop. From the shoeing of a horse would he go up stairs and make what he called a first-class photograph or tintype. I have seen the "copy finished in ink, crayon, oil, and water," that would scare the "rats from the house," delivered, praised, and prominently displayed as remarkable specimens (and they were, too) of the "remarkable art." All prices are asked and obtained. Too much at any price. I am told by the next-door neighbor that the photographer is coining money, and yet I have seen him get as much as ten dollars for a print the full size of a sheet of bill-paper, in a 25 x 30 three-inch moulding, gilt frame, mat of suitable size thrown in! Can he coin money, especially if he employs Johnson at the price of his board, to spoil it with his ink, oil, and colors? (Not personal, simply facts.) Then about ferrotypes; what of them? Well, the original plate is worth the most. I have called upon at least a hundred in my travels, and found the "artist" overflowing with his knowledge. Call for photographic literature, and he has not got it. Ask for the *Philadelphia Photographer*, and he may have heard of it, but never saw it. He knows as much as any of them, "and a little more." This is not an ideal, it is a fact. *All over the country*, even in large towns and cities. Washburn,

of Louisville, and Anderson, of Richmond, are among the most brilliant luminaries of the Western and Southern photographers. The first, I have known for years, and intimately. He is a genius in the dark-room and under the light, besides being a gentleman in his reception-room and on the street. The latter is so much like him in all these traits, that I feel as much at home with him as though I had known him for years. I have been peculiarly struck with the similarity of the results produced by these two gentlemen.

Washburn's place I know well, while I have not been into Anderson's beyond the reception-room, and yet I imagine that I know all about it by his work. It would be a glorious thing for some of the operators that I have seen if they could only be induced to visit the galleries, and see the work produced by these two men. I would not infer by the foregoing that I have not found some meritorious work outside of these two galleries, for I have seen some quite presentable. At Danville and Richmond, Ky., to say nothing of Louisville, Ky., and Richmond, Va., I see good, better, and best, besides the worst to be seen in these places, and many others not mentioned.

I do not raise these points or comparisons to ridicule, but give them to you as information, for I can assure you that I would be loth to believe that in these enlightened times that such miserable work could have been palmed off upon the people, if I had not seen it with my own eyes. Where is Lambert with his wonderful "improvements"? There are thousands of photographers scattered about the country that have yet to hear of him. Let him come with his lightning and "lighten" up those who are wandering in darkness. Let him loose among these benighted ones, that he may show them the proper disposition of their ill-gotten gains, collected by palming anything upon their patrons for which no royalty has ever been paid to him. Now and then I find upon an old shelf some of his worthless chemicals called "bottled secrets," and stowed in the pigeon-holes of the desk, one of his permits, licenses, or some other paper showing that he has *bought* the privilege of making an honest living. And yet he is unable to do so. Oh, ye of little

faith! *Travel*, if you want to be enlightened and learn just how much good he (Lambert) has done to photography. You of Philadelphia, you of New York, of Baltimore, Washington, San-Francisco, New Orleans, Cincinnati, St. Louis, Chicago, Louisville, and other large cities of this continent, not forgetting Boston and Salem, of Massachusetts, have much to learn yet. You must travel to learn what is going on in the great art of photography. It is only necessary to visit a few of the smaller towns to open your eyes to what is going on in photography.

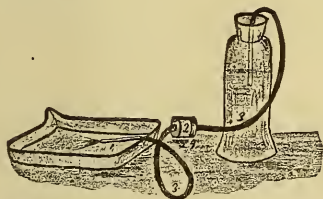
STOP AND THINK.

BY S. L. PLATT.

How many there are who could better their condition by so doing, if they would only put their thoughts to use.

To prevent varnish drying dead on an under-exposed ferrotype, and to make it so the artist can brush it if desired, flow it before drying with a solution of gum-Arabic water.

Make filtering a pleasure by using Platt's "filter syphon." Take two pieces of rubber hose, two feet long, place in the centre a cylinder large enough to contain a sponge or cotton wad.



1, Glass tube. 2, Cylinder containing sponge. 3, Rubber hose. 4, Cork to cylinder.

For ordinary use the cylinder can be made of tin, the size of a large cork, a tube being made for the cork the same as the one used in bottom of can. After using, place the tube in other hose, and it will keep filled and ready for use at any instant.*

* The cut illustrating this was photographed direct from the pencil drawing of Mr. Platt, and a "printing-plate" made from it by the photo-engraving process of the Crosscup & West Co. It is interesting on that account, and shows how easily photographers may illustrate their articles. Ed. P. P.

AN ESSAY ON THE EDUCATION OF THE EYE

WITH REFERENCE TO PAINTING.

BY JOHN BURNET, F.R.S.

(Continued from page 149.)

ARRANGEMENT.

ARRANGEMENT, though not partaking of that high quality which distinguishes composition, yet nevertheless embraces a knowledge of those characteristic features to be found pervading the general appearances of nature, and to be employed in giving a truth and vigor to assemblages of lines, shades, and colors. All objects whose images enter the eye are subject to certain laws, which regulate their form, and assign to them situations in the picture which such forms indicate, and which, having been often observed, have obtained a general consent as to their truth and natural character. To know, therefore, these arrangements observable in nature is absolutely necessary, that we may employ such knowledge in producing the same results in painting, especially as we find the works of those artists who have thus combined their skill in arrangement, give the greatest pleasure to the eye of the spectator: this gratification arises from the several images being depicted in their most characteristic features. In looking abroad

FIG. 42.



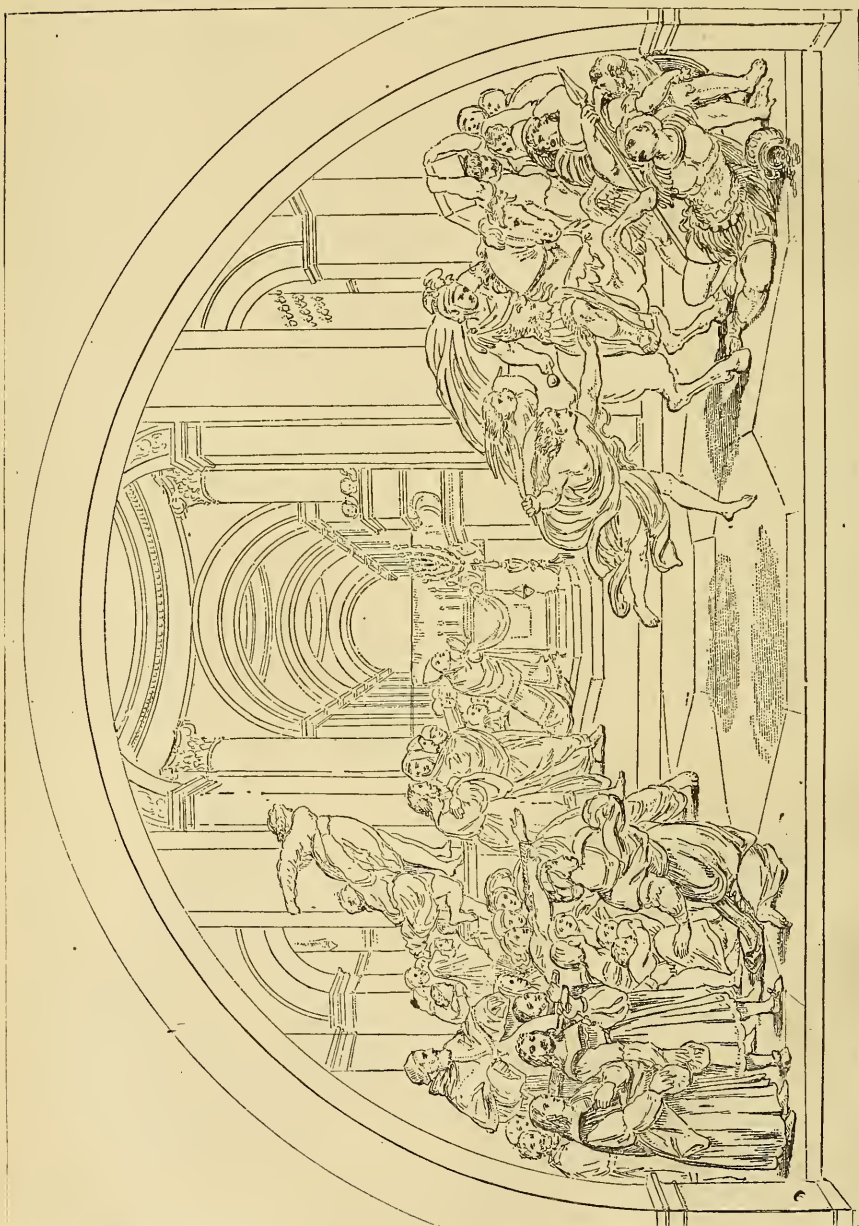
CROSSCUP & WEST, PHILA.

upon the face of nature, for example, in a wide extent of country, where the eye can take a comprehensive observation, we notice towards the horizon a multitude of parallel lines stretching across the landscape, the

lines crossing them being foreshortened, lose their breadth, while the perpendicular lines of objects lose their consequence, owing

and become more rugged in the outline, and stronger in effect from their shadowed portions being larger and darker, owing to their

FIG. 43.



HELIODORUS.

Grosvenor & West Phila.

to their diminution from distance; but as these approach towards the foreground, we perceive that they gain their ascendancy,

nearness to the eye. Being acquainted with these facts, we can produce such an arrangement as shall have the appearance of truth,

and become enabled to heighten in effect the arrangements of natural representation, and by the addition of colors, whose properties belong to near objects, by the addition of light and dark coming in contact, which gives distinctness and firmness, by the introduction of figures and other objects, we can assist the perspective, by their assuming forms more or less under its influence, according to their situation.

We know that quietness and regularity give dignity to part of a composition, while their lines contrast with others expressive of bustle or picturesque assemblage of forms; we have noticed this exemplified in the Attila, etc., we see it also in Fig. 42, part of the Heliodorus, where the heads of the figures who bear the chair of the Pope surround him with studied regularity, giving calmness by the arrangement, and firmness by the perspective appearance of a column upon whose base he is elevated.*

(To be continued.)

NOTES AND PRACTICAL SUGGESTIONS.

BY A. M. DE SILVA.

(Continued from page 137.)

SOME years ago, when I first commenced to use a glass rod to take off the surplus silver from the albumen paper, I noticed that the surface of the first sheet which was floated in the morning was invariably very much scratched. Being asked, only recently, the reason of this by a brother photographer who was similarly troubled, it

would appear that I was not the only unfortunate, and, no doubt, this and the following notes will be of service to some one.

I make it a *rule* to wash up every vessel as I get through using it. In the morning, the silvering tray was wiped out with a clean, dry rag, kept especially for the purpose, and the glass rod was run through the cloth also, in case of any dust being upon it. The idea struck me that it was the dry surface of the rod which did the mischief. Well, the rod was washed under the hydrant, and there were no more scratches upon the first sheet silvered, other than were put upon by careless handling previous to floating; but a new trouble set in, the *first* sheet was covered with tiny "tear-drops!" Of course, there's a remedy for most everything, and so one was sought for this trouble. Was it the difference in density between the water on the rod and the silver solution on the surface of the sheet? The rod was dipped into the silver bath before commencing operations, and—there were no more "tear-drops" on the first sheet only.

But "tear-drops" come from other causes, one of which I have good reason to believe a good many photographers do not suspect. If the temperature of the room in which

* Lanzi, speaking of this work, says, "In the course of this year, 1512, Raffaello was employed in the second chamber on the subject of Heliodorus driven from the temple by the prayers of Onias the high priest, one of the most celebrated pictures of the place. In this painting the armed vision that appears to Heliodorus scatters lightning from his hand, while the neighing steed is heard amidst the attendant thunder. In the numerous bands, some of which are plundering the riches of the temple, and in others ignorant of the surprise and terror exhibited in Heliodorus, consternation, amazement, joy and abasement, and a host of passions are expressed. In this work, and in others of these chambers,

Raffaello (says Mengs) gave to painting all the augmentation it could receive after Michael Angelo. In this picture he introduced the portrait of Julius the Second, whose zeal and authority are represented in Onias. He appears in a litter, borne by his grooms, in the manner in which he was accustomed to repair to the Vatican to view this work." In these heads Raffaello has given the portraits of his pupils M. Antonio and Julio Romano, with the Pope's Secretary, etc. For this anachronism Raffaello has been blamed by the critics, without considering that it was the only way the painter had of connecting the Jewish with the Christian church, and exemplifying the temples of both as the sacred depositories for those funds which were to be given out to the widow and the orphan poor. Without detracting from the great merit of Raffaello, we may rest assured that these works were of too much importance not to be watched with the greatest vigilance, and assisted in their moral efficacy by all the learning within the walls of the Vatican. Those who wish to see how close Raffaello often kept to the history, may examine the whole story in 2 Maccabees, chap. iii.

the paper is silvered be too high, the evaporation of the water from the silver solution on the surface of the sheet will be so rapid (aided by the repellent nature of the albumenous coating) as to cause it to run together into very small drops, and not even blotting-off will give a uniform surface, the portions where the silver collected printing red, and blistering in the hypo. It is much the better way to silver in a cool room, and when the paper is surface-dry take it into a warm room or closet made for the purpose, and heat it up quickly, so as to dry the paper as rapidly and thoroughly as possible. When it comes out of the fuming-box it will be limp enough to lie nicely on the negatives; and unless it be dried bone-dry previous to fuming, not only will the paper print woolly, but it will have become yellow.

I once asked one of the partners in a large stock-house in New York, "Wouldn't it be well to send out formulæ best suited to the salting of the different brands of paper you sell?" The reply given ran: "It would be of very little use, because everybody would be sure to make some modifications in it, and we would have just as many complaints, and the same number of letters of praise." While there is a deal of truth in the reply of the gentleman above referred to, it strikes me that instructions and formulæ sent out by the dealers in albumen and other photographic papers have been always too brief; were a few *cautionary* remarks as to everyday failures appended, the average photographer (to say the least) would take notice of it, and follow out the advice given.

In the advertising pages of the English photographic journals, one firm publishes formulæ for the "cross sword" brand of albumen papers, the silver bath recommended being about seventy-five grains to the ounce; something which would astonish us here. It does not say anything about fuming with ammoniacal vapor, consequently, I take it for granted they do not fume, and a stronger bath is required when it is not done.

It was reported that all the large German albumenizing firms, with one exception, had combined; but is all the paper salted and prepared alike? That is the question. Perhaps the following experiments with this brand of

paper will let in a little light on the subject. I procured four samples from three different houses, every one *the* "genuine article," and not knowing whether the paper-makers were in the ring, I took it for granted they had something to do with it, the *swords* being impressed as a "water-mark" in the fibre of the paper, a mark which seems (unfortunately for the photographer) to be gradually making its way toward the centre of the sheets. No doubt, when it *does* get there, the paper-makers will, at the "earnest solicitation" of the much-abused followers of the "black art," change off, and chop the sheets off in a new place, so as to bring the swords in their proper location—out of harm's way.

The albumenous coating on the three samples presented a decidedly different appearance. I will style them Nos. 1, 2, 3, and 4, in order better to follow the experiments. Nos. 3 and 4 came from the same firm, No. 3 being white, as were Nos. 1 and 2, No. 4 slightly tinted with pink; all being doubly albumenized. The surface of No. 1 had a broken-up appearance; No. 2, somewhat sunken in, about equal to the old style of single, but still glossy enough for all purposes; Nos. 3 and 4 had the stoutest surface layer of albumen, which was remarkably solid looking. As an impression prevails that all "cross sword" brands are alike, I tried them first on the same bath, which was fifty grains of silver to the ounce of water, and neutral; floating a minute, drawing the sheets over a glass rod; fuming fifteen minutes. No. 1 was, when dried, full of reticulations.* The fuming about right. No. 2 was over-fumed, and Nos. 3 and 4 required nearly double the time. I printed on the various samples from the same negatives alternately. Toning with a sal-soda and salt bath, the race lay between the last three; No. 1 toning so unevenly this time that I could not get a good print; No. 2 toned the quickest, giving very beautiful grays, bluish-purple, and bluish-blacks; No. 3 came up slowly, giving luscious, rosy purples; could not get grays, and the blacks possessed a warm tone.

* These were *not* occasioned by allowing the sheet to curl up, and then, when dry, unrolling it; the sheets being kept open at the bottom by laths, and held by the two upper corners.

The difference in tint of prints toned to brown was also noticeable, in this particular No. 3 giving the richest color, inclining to a chestnut, No. 2 to a sepia. The tint in the albumen of No. 4 presented a just comparison of the tone of the prints, but it resembled somewhat No. 3, which gave evidence of citrate of soda having been used in the salting, which No. 2 did not possess.

On a bath made acid with nitric acid, No. 1 worked much better, and did not crack near so badly. No. 2 worked best on a bath of forty grains to the ounce, slightly acid with nitric acid, and very well on one of thirty-five grains; but No. 3 required one of fifty grains and neutral; No. 4 required longer floating, and worked best at fifty-five grains. No. 4 would keep the longest after silvering; but it is imperative that the bath be kept up to the strength above given, and in very good order, otherwise most miserable results are obtained, no doubt owing to the dye used in the albumen. There are still other importers who advertise the "genuine brand," whose samples I have not yet tried comparatively, but hope to do so at an early day.

Since writing the above I have received another sample of "No. 1;" although of much better quality than the first samples tried, it does not approach either of the other samples, and still will not work at all on a neutral silver bath.

(To be continued.)

PEN AND INK SKETCH FROM LIFE IN A PHOTOGRAPH GALLERY.

THAT two heads are sometimes *worse* than one is a truth many a photographer has realized when awaiting the judgment of his customer *and a friend*.

The following graphic description we cull from a letter of one of our correspondents—Mr. L. W. Crawford, Fort Worth, Texas:

"Business was fearfully dull, when, one morning, my spirits were suddenly revived by the appearance of a mourning widow, bearing in her hand a small photograph of the late dear departed. From this picture, she desired me to make a life-size crayon portrait. I began the work with real zest,

for the gentleman had been a valued friend of my own.

"Time, care, and labor at last evolved what I considered an excellent picture in every respect, and of which I felt justly proud. It was framed and set up on an easel for the inspection of the lady. She came, alone, at the appointed time. The moment she espied the picture, she burst out: 'Oh! oh! oh! Boo-hoo-hoo! Oh! Boo-hoo-hoo! Oh, I can't look at—Oh, Bruce! poor Bruce! how can I see you as you are, and not speak to you? Oh! oh! Boo-hoo-hoo! Oh my! oh my! My poor Bruce! Oh, did I ever think I would see you so plain! Oh, how can I stand it? My poor Bruce! Oh, I do think it is so natural! Well—Oh, dear!—well, my carriage will be around in half an hour, and I'll take my poor Bruce home.'

"Carriage comes, and a young brother of Bruce joins his sister: 'Why, Mattie, that does not look as much like Bruce as I do! Just look at that white spot in the eye; look at that smut under the nose, and on the side of the jaw; and look, it is gray on the top of the head; the shirt bosom, at the bottom, is all dirty. I would not know it was Bruce at all if it were not for that watch-chain. I can't see anything about the likeness that looks one bit natural, except the mouth and cheek and eyes; only that white spot spoils them. Now, if they will make you another picture—leave out that white spot, take the smut from under the nose, wash the face and shirt, and black the hair—it would do.'

" 'Well, yes, John; since I come to look at it, it is *horrible*. I do not want it. It does not look like my husband one bit. Now just come here, John. Look at this capital picture; just look at it; it looks at you anywhere in the room; it is splendid. I wish my husband's picture was as good as this. And here, John, is another one of old Mrs. Jones, made from that picture sticking in the corner of the frame. See how natural it is. Now, if my husband's was like that, I would not begrudge \$100, much less \$35. Oh, I forgot; I must go to Brown's millinery store before I go home.

" 'Good-day, Mr. Crawford.' "

Who of us haven't "been there"?

ITEMS OF PRACTICE.

BY RANALD DOUGLASS.

PHOTOGRAPHERS, undoubtedly, are aware that the front glass of their portrait or view combination will cut a much larger field than the full combination, but in such case the lens does not preserve the straight lines of nature, they are curved either inwardly or outwardly, according to the way the lens is used; when the stop is used in the front the lines curve outwardly, and the reverse when the stop is used behind. This distortion is so slight that it altogether escapes notice in landscapes, but is often objectionable in the case of architecture; in some cases this disadvantage is sometimes an advantage; for instance, in photographing an old building, where the roof, through age, curves inwardly, use the lens with the stop in front, which tends to correct it. We have sometimes observed walls of new buildings curve outward. Where this is apt to be objectionably noticeable in the picture, we can to some extent correct it by using the single lens with the stop in the rear.

Some time ago, while I was trimming prints before toning, I had some unexpected calls on me, which prevented me from toning till time for closing up, so I thought best to leave the prints over as they were till morning. The printing-room being on the roof, the gases from the leaky stove ascending attacked the paper; the uppermost prints were turned yellow, and looked exactly as if they were stained by hypo; the undermost prints remained white; those partly exposed were partly affected, etc., toning and fixing refused to clear them off.

In the *Philadelphia Photographer*, page 2, Mr. A. M. De Silva suggests some improvements on apparatus just where the wants have been keenly felt. Apparatus-makers of to-day are never slow in meeting the demands of the day. Hope they will take his hints.

A few words on rubber baths may not be out of place. For the outdoor worker, who expects to be out daily, there is nothing better than the old tight-top rubber bath; very often unjust faults are found with rubber baths. I have used them for years, and have little or no complaint to make of them; they are troublesome when new, but when

they get a little aged the trouble disappears; they have to be kept clean as glass has. The trouble from new baths (rubber) comes principally from some oils, which seem used in their manufacture, giving rise to streaky plates; would it not be well for the manufacturers always to clean out their rubber baths before they put them on the market, so save the photographer the time and trouble of doing it himself?

As for the negative bath, it seems too much has been said erroneously about it; most of the failures attributed to the bath do not belong there. Pinholes do not come from the bath unless it is very weak, then the pinholes are uniform over the whole plate. In such case, every one knows the remedy when pinholes are irregular, if not from dust they certainly come from the collodion. Paper will filter collodion thoroughly; when the filter is folded right there is no trouble. The negative bath, when once started right, generally keeps in working order till exhausted. So, beginners, when you are in trouble, don't be in a hurry to blame your bath.

In the 1880 *Mosaics*, we read of a man whose health suffered from the use of intensifiers. Why use mercury, sulphuret, etc., when iron will do the work quickly or slowly, as you choose to have it? beside it works very effectually. Below is a formula for which I am indebted to the editor of this magazine; since using it I have had no trouble in getting all the intensity I want. If it turns muddy, increase the dose of the acid a little. Here it is:

Sulphate of Iron, . . .	1 ounce.
Citric Acid, . . .	$\frac{1}{2}$ "
Water, . . .	1 quart.

Use either before or after fixing as you like best, with a few drops of silver in it just before use, as in case of the pyro intensifier.

- HYDROPHOBIC PHOTOGRAPHS.

It is the custom of travellers in Europe to purchase largely of photographs of the places and things they have seen, and there are many large photographic publishers who live on this sort of trade. The prints are purchased in an unmounted state, and are pasted into scrap-books, or upon cards after the traveller arrives at home again.

For a number of years lithographic imitations of photographs have been palmed off upon the unsuspecting buyers, but the worst trick played yet seems to have originated in London, in Tichborne Street, in the section Piccadilly. A gentleman purchased a number of prints there, which were praised to him specially because they were "in permanent pigments and would not fade like photographs." He brought them home and proceeded to mount them in his scrap-book; first soaking them, as he had been instructed, in water. When placing them upon the cards, symptoms of hydrophobia were shown, because of the dreadful fear they seemed to have of water. In a startling "battle-scene," the foes disappeared with a mere rub; the virtue of splendid Venus should stand no washing at all, and the mighty arms of a gladiator vanished with his head without notice, and so on for some numbers, until the gentleman in his distress wrote to us for a solution of this dissolution. Such dissolving pictures he had never seen in any lantern.

The story was soon told. The prints were made by a gelatin process, and had neither been "fixed" (in alum solution, as required to "tan" them) nor varnished as they should be if photo-lithographs.

Selling such prints is nothing less than a cheat and a fraud, and we feel it our duty to call attention to it. It is a stab at our art as well as her patrons, to permit this, and we hope our contemporaries will help to cry down the practice.

If the buyer would not be bitten by these hydrophobic abortions let him beware, and ask the question beforehand as to what the prints are. The touch of a wet finger will expose the trick, for such pictures cannot stand water.

were they, like Rip Van Winkle, to suddenly awake from their long sleep, and behold, with wondering eyes, into what the results of their humble toil had so rapidly developed? Hardly can we mention any branch of industry, art, or science in which this, their offspring, does not play a part, and in some a most useful and important one. As an assistant to the artist, it is of unlimited value, giving him, if properly handled, a "bit" or landscape which would require hours to sketch. It is a silent detective to the counterfeiter's skilful hand, and leaves with us an undeniable copy of the face of the outlawed criminal, who, having once visited the precincts of the photographic official, cannot say, on his compulsory return, "I now receive my initiation to the walls of justice."

The great discoverers could now cross their legs; peruse the pages of at least a dozen different photographic journals, in almost every language on the globe, all ("well, mostly all") devoted to the advancement of our fascinating art. Surprised most undoubtedly would all be who witnessed the birth of this child, born of genius, and with the most promising traits of character, but, alas! under circumstances so unfavorable, and enemies so plentiful.

So much worth was not to be crushed by its foes, nor destroyed by the unfertile surroundings; but, like the hardy acorn, it sent its vigorous shoot up, up, until it now stands like a noble tree, swaying its numerous branches, thrusting aside its tottering enemies, and demanding its rights and freedom. Not yet has it attained the ponderous dimensions of the full-grown oak; but each year it sinks deeper its roots, adds and extends its branches, until every interested watcher is ready to exclaim, "Where, oh where, are thy boundaries?"

Again, my brother, did you ever pause to think of the marvellous changes which are destined to be wrought in a much shorter time than that which has elapsed since the death of our photographic forefathers? Ah, yes! how surprised indeed would we be upon waking, should any of us be so unfortunate as to make acquaintance with that hunchback, partake of the mysterious draught, and, as did Rip, succumb to the

PHOTOGRAPHY—WHAT IS ITS LIMIT?*

BY T. H. BLAIR.

DID you ever stop, brother photographer, to think of the unspeakable joy and astonishment the present position of photography would cause Daguerre and his co-workers,

* Written for Mosaics, but received too late.

unnatural sleep. Methinks, should the hale old sleeper inquire for "my hobby," the wet-plate picture, all would be wrapped in mystery, except, perhaps, some *old* veteran might make answer: "It has been dead these twenty years a most."

Dry plate would then run riot. The tourist, the artist, or the solace-seeking maiden, would, instead of the *now* popular sketch-book and pencil, have the *then* popular camera and dry plate (or some more modern and convenient device), all, doubtless, of the *ever* "popular" American Optical Company's best. These, with the perfect, the simple, the rapid, the reliable plates, would form an important part of the personal property of all lovers of Dame Nature.

Reader, do I not hear you say, "What over-enthusiastic disciple is this? Should he live to be as old as Methuselah, he will never see his prophecies fulfilled." Why not, I pray thee? In reply I can most seriously say, that even at the present day no very difficult obstacles present themselves which would prevent all my predictions being carried out to the letter. Dry plates and emulsions can now be obtained, which certainly are nearly all we could ask for. The greatest difficulty lies in getting practical photographers to carefully test what the manufacturers claim for them.

One year ago, I was a most bitter and obstinate enemy to dry plate in any form, fully believing it to be on a par with "perpetual motion," etc; but happily, one leisure day, I determined to give it another and a more thorough trial. Carefully I set about it, and so satisfactory were the results that I feel as though too much cannot be said in favor of the cause.

I believe there is an excellent chance, for those who would make themselves familiar with dry-plate work, to do a good and legitimate business in developing and printing negatives for amateurs, if they would do it at a reasonable rate, and strive to give the finest results. There are hundreds of ladies and gentlemen in every city in the United States who, upon starting for a week's ramble among the mountains or at the sea-shore, would be delighted at the idea of taking with them a camera and plates, were there not so

much experience and work required before the pictures are completed. Any one familiar with the development of a dry plate knows how much more it is under his control than the wet; and a list of exposures under different lights could easily be given, so that even the inexperienced could proceed with comparative surety of success.

But, says the landscape photographer, should all this come to pass, our business is gone; for then "every man would be his own photographer." In my humble opinion, such would not be the case. It would no more injure your trade, or lower your profession, than does the fact that almost every school-boy or girl sketches and paints, make "every man his own artist," or decrease the sales of the professional artist; but instead thereof, it cultivates a taste, and creates a desire for his works.

And yet has all this writing shown the limits of photography? No. And the answer to the question heading this article no man can give, at least not in the year 1880.

In conclusion, let me add an urgent request to all my finger-stained brethren of this dusky art, to give this "future" process an early and careful trial. Follow strictly in the smallest detail the directions, for often a very slight variation makes a marvellous difference in the results.

SOCIETY GOSSIP.

THE BOSTON PHOTOGRAPHIC ASSOCIATION.—The monthly meeting was held at the studio of J. W. Black, 333 Washington Street, May 5th, 1880.

Previous to the call to order, the members spent an hour in examining and criticising the specimens of easy positions, brought by the members in compliance with the call from the executive committee.

Mr. Burnham, of Boston, had some two-thirds figure boudoir prints, and also some cabinets, which showed careful posing and chemical effect, and were examined by those present with much interest.

Mr. Strout, of Woburn, brought in some cabinets which were considered good, the large heads of children being especially fine.

Mr. Hastings, of Newton, also had some fine cabinets.

Mr. Partridge, of Boston Highlands, brought some panels and cabinets, which were examined.

The meeting was finally called to order by the President, at 8.30 o'clock, there being a large number gathered.

The records of the previous meeting were read and approved.

The subject of making some disposal of the stereoscopic box, given to the Association by Scovill Manufacturing Company, and a pair of stereo. tubes given by Mr. Benjamin French, was brought up and discussed, and the executive committee concluded to have the matter decided at the next meeting.

There were several new photographers present, and a general feeling of interest was shown by all.

Mr. W. A. Webster, the enterprising artist from Waltham, was proposed as a member of the Association.

At 9.30 the meeting was adjourned till the first Wednesday in June.

W. H. PARTRIDGE,
Secretary.

CHICAGO PHOTOGRAPHIC ASSOCIATION.—Regular meeting was held in their rooms, 229 and 231 State Street, Wednesday evening, April 7th, 1880; meeting called to order at 8 o'clock by the President, Henry Rocher.

Minutes of last regular meeting read and adopted.

The President stated that the topic of the evening would be the discussion of a trouble which had been met with, more or less, by photographers in working the various brands of albumen paper, and the fact appeared that the foreign papers gave the most trouble, which was the softening of the albumen and its scaling or dissolving off during the process of toning, fixing, and washing.

SECRETARY.—The topic before us, this evening, should have the earnest, careful attention of members, and the craft generally. The investigations, thus far, have been superficial. The theories as to cause and cure are numberless and varied, but nothing based upon positive knowledge gained by patient experiment and investi-

gation has been offered. Very little as to the chemistry and test conditions for its use in our art-science is known of albumen by the craft at large, and it is my belief, based upon observations, that still less is known of the article in question by albumenizers. Eggs are taken from the market, produced under all sorts of feed and surroundings, the albumen separated and mixed according to the favorite formulæ, spread upon the paper, and sent to the dealer, and through him to the photographer, who is left to find out in the best way he can what strength of silver, etc., will produce the best prints. I will not pursue the subject further at this time, but, in calling your attention to the gloom that surrounds this important staple of photography, hope to interest some who have the time, inclination and skill, to throw light upon this subject.

MR. ROCHER.—We have not changed our mode of working for ten years, have used the S. & M. paper mostly, a plain solution of silver and water, floating sixty to ninety seconds, and fuming. The only precaution taken against the blister trouble was to have a large tank made and placed at edge of sink, and filling this with water, let it stand until it was nearly tepid before using.

The President called Mr. Quigley, who has charge of his printing-room, to further explain their methods. "We use a plain silver bath, sixty grains strong, S. & M. extra brilliant paper, eight kilo—floating sixty seconds, draining over a glass rod, and blotting nearly dry before hanging up. Would say that before silvering we hang the paper in a large box, similar to the one used for fuming, having in the bottom a dish filled with water, the vapor thrown off permeates the albumen and allows the silver to form an even deposit."

MR. NELLIS.—Do I understand you to soak the paper in water?

MR. QUIGLEY.—No; hang it up on pins the same as for fuming, and leave it two hours or more. Before toning I wash the prints with water, having acidified it. Two ounces acetic acid number eight to one hundred and sixty ounces of water. I find they work better if the water is tepid. Fume from twenty seconds to twenty minutes. Regarding these troubles which we

meet, being caused by the methods of working, I affirm that the fault is in the paper. Have tried same kind of paper on exactly same solution, and under same conditions, and it varied greatly in results, showing that the paper was at fault. What we call measles, will appear if the gold in toning-bath is not neutralized.

JOSHUA SMITH.—I have experimented considerably with paper, and lay most of the trouble found with the Dresden papers to the albumenizers. They allow the albumen to putrefy before laying it. Take mucilage and allow it to become acid, and it loses its adhesiveness, and so it is with the albumen. When putrid it becomes acid, and its adhesive qualities deteriorate. I find that strong silver, sixty grains, is best. If forty grains are used, the roughness appears, fifty grains we find it growing less, and at sixty still less, and at seventy with me it disappears, and the paper works good. Let water from the tap run on a sheet of the Dresden paper, and after a time, it (the albumen) softens and runs off. I think, if the albumenizers would add a little chrome alum, the trouble would disappear. Pure albumen, once dry, will not be affected by water. I advise a plain solution seventy grains strong.

MR. ROCHER.—A majority, I think, favor weak solutions, but they lose by it. I recommend strong solutions, not less than sixty grains. When we were using the Sarony paper, in 1860, which had a very high gloss, sixty grains were sufficient. A high-gloss paper cannot be used with weak baths. Coagulation takes place when the bath is the right strength. A great deal can be saved in the clippings and washings.

MR. GREEN.—I understood your printer to say he blotted the paper when taken from the silver solution.

MR. ROCHER.—Yes; we find it obviates the frequent trouble called "tear-drops."

MR. GREEN.—Have you tried rubbing the surface of the albumen with a tuft of clean cotton before silvering? That will prevent tear-drops.

MR. ROCHER.—Yes; we have used that method for years. It is a good thing.

MR. GREEN.—Fresh paper does not re-

quire it, but old paper is certainly benefited by the treatment.

MR. BASSETT.—I have used the method for five years, and add my testimony to its great value.

MR. GREEN.—As I make my silver solution a little different from the usual way, it may interest some to hear the formula. I use the domestic brands of paper and forty grains strength of bath. Take forty grains nitrate of silver to each ounce of water. To every eight ounces of this solution add ten drops of nitric acid, C. P., make alkaline with liquid ammonia. Then add alum solution until the precipitate is dissolved. If you are using the Hovey, Morgan, or Clemons paper, I advise you to try this solution. Mr. Hesler says the softening of the albumen is caused by fuming before the paper is dry.

MR. JOSHUA SMITH.—I would say that, having bought a barrel of the cheapest salt I found in market, this softening of albumen gave me great trouble, and I tested the salt, satisfying myself it was causing the trouble. We used a higher grade, and our trouble ceased about blisters; the small pin blisters will always dry down if the prints are thoroughly fixed. My friend Shaw said an acid produced this trouble, and I acted on this suggestion, and put the prints in a bath of carbonate of soda—the little blisters disappeared, but big ones came instead.

MR. SHAW.—I have never had this trouble of blisters. My prints are washed thoroughly, toned and fixed, and put directly into a saturated solution of bicarbonate of soda, and left for ten minutes. It is sure.

MR. BASSETT.—What silver solution do you use?

MR. SHAW.—A combination bath; the same as for wood printing.

MR. ROCHER.—For rapid printing, try this. Silver on usual bath in usual way, dry the paper between blotters; then float back of sheet on following solution: one hundred ounces water, one ounce muriatic acid, C. P. It prints very quickly and gives rich tones.

MR. ROBINSON.—How long do you float?

MR. ROCHER.—One minute.

The Secretary presented the Society with some examples of cabinets sent by Well G.

Singhi, of Binghamton, N. Y. They were examined with great interest, and commended Mr. Singhi as a photographer of skill. A vote of thanks was passed for the collection.

Mr. Carbutt sent a number of large prints of interiors, showing the results of his gelatino-bromide dry plates, with the following explanation :

"I forward three prints, to be shown at your next meeting, from my gelatino-bromide plates. The 8 x 10 interior of library is taken with a Darlot hemispherical lens, the third on list, five-inch back focus, next to the smallest stop used. The 14 x 17 interior of armory is taken with a Zentmayer wide-angle lens, smallest stop used, and developed as follows: Plate placed dry in black rubber pan; to eight ounces of a two-grain solution of pyro (Schering's) were added four ounces of the ammonia and bromide solution (ammonia fortis, one-half ounce; bromide, one-quarter ounce; water, twenty ounces), thoroughly mixed and poured over the plate; in about fifteen seconds, the image being pretty well out, two ounces more of the ammonia and bromide were added, and again poured over the plate until detail was well out; water turned into the pan, plate well washed and fixed."

The Secretary distributed sample packages of Lawton's absorbent cotton for filtering, an article that needs no further preparation than placing in the funnel dry, and the solutions filter quickly and perfectly. A report as to its merits was asked for next meeting.

The Secretary read a letter from Mr. Gentile stating that the stock-dealers would furnish the society the Chicago College of Pharmacy for their meetings, rent free.

The letter was discussed with considerable feeling, and by vote the offer was rejected, and an assessment ordered of one dollar from each member to pay for rent of college hall, and that the Secretary be instructed to receive the same and hold next meeting at that place.

The President congratulated the society on the large attendance and the increased interest, and hoped that in the new place

of meeting it would keep on in the good work, and at each session grow in interest.

On motion adjourned.

A regular meeting of the Chicago Photographic Association was held in the College of Pharmacy, Wednesday evening, May 5th, 1880. Meeting called to order at 8 o'clock by the President, Henry Rocher. Minutes of last meeting read and approved. T. N. Briggs elected to membership.

The Secretary read the following paper from Jay Densmore, Kalamazoo, Mich. :

GELATINO-BROMIDE DRY PLATES.

"At one of the meetings of the Chicago Photographic Association last winter, a negative, made upon a gelatino-bromide dry plate of my manufacture, was presented for the examination of the members. I presume that it may not be uninteresting to those who saw that negative to learn as to the progress I am making with that beautiful and delicate process. I therefore send herewith four negatives, two stereoscopic outdoor views, and two card portrait negatives, selected from my work of the last few days, which will tell the story much better than words can. I do not send them as specimens of perfect negatives, by any means, for perfection in any department of this world's work, especially that of making negatives, is seldom if ever attained; but the association is taking so much interest in the new process, that I concluded a few samples of my work, poor though it might be as compared with that produced by others, would not only be interesting, but perhaps beneficial to the individual members of the association.

"The plates from which these negatives were made were manufactured by me, and are fair samples of the work I am now daily producing with such plates. They work with the greatest certainty, regularity, and uniformity, and I have succeeded in so mastering the process of manufacturing the plates, that the different batches manifest the same uniformity, the one with the other, that are displayed by the plates of the same batch. At the present time the gelatin, with me, does not manifest any greater degree of uncertainty and unrelia-

bility than does the gun-cotton used in ordinary collodion; neither does it require any greater care and skill in its manipulations to produce satisfactory results.

"The greater part of my work is out of doors, and I have not, therefore, found it desirable to try to make plates of the very high degree of rapidity claimed for the process in many quarters. I make only one grade of plates at present, and they require from one-half to one-third the time of exposure necessary for a good bath-plate under similar conditions. I am using a modified ferrous-oxalate developer, of very simple construction and use, and with it I find that the plates afford considerable latitude of exposure, abundant, in fact, for all practical purposes. Mr. W. S. White, of this place, who is using the plates occasionally in his gallery work, has tested them in this respect by making two *carte* exposures upon the same plate, varying the exposures of each from one-third to one-half, without the resulting negatives showing any very great difference in appearance and printing qualities; both of them, of course, were always developed at the same time, in the same tray, without being cut apart. I do not find intensification necessary only in very rare instances. The negatives that I send herewith were none of them intensified at all, and are just as they were when they came from the developing tray, except the varnish that is upon two of them.

"The plates are developable with the ordinary pyrogallie acid and ammonia developer, or by any of the developers in use, but I very much prefer the developer I am using. Others, however, who are accustomed to other developers, might, perhaps, like the others better.

"I am contemplating manufacturing plates for the trade in the near future, and am at present able to supply them in moderate quantities. I am, however, still making slight improvements in processes of manufacture, towards greater simplicity, and shall, therefore, defer making any public announcement of such fact through the regular advertising mediums for a time yet.

"If agreeable to your society, I will send

sample lot of my plates for trial. They work so very nicely in my hands that I feel confident that any photographer who is accustomed to working gelatino-bromide plates, and knows how to handle them, will be pleased with the results they will give him."

The negatives sent by Mr. Densmore, also the prints made from them by Mr. Rocher, were passed around for inspection, and observed with great interest. A negative sent by Mr. Carbutt and prints made by Messrs. Edgeworth and Green, from negatives made with the Carbutt plate, were also inspected and favorably received.

Mr. Edgeworth said the exposure with his plate was made with a drop. Carbutt's was two seconds with a Steinheil lens, number five, five-eighths stop, and developed according to printed formula sent with plates.

Mr. Green said he used twenty ounces of water instead of thirty, as given in formula.

MR. EDGEWORTH.—My experience has been that the formula given by Mr. Carbutt contains too much pyro. I use about half the quantity. Have never tried the ferrous-oxalate developer. A great mistake is made in soaking the plate before development. I develop mine dry. Have made eight negatives to-day on the Carbutt plates without a failure.

MR. BRIGGS.—What intensifier do you use for the gelatino-bromide plates?

MR. GREEN.—I use the following: Four ounces distilled water; one hundred and ten grains of iodide potassium; add the potassium ten grains at a time; when dissolved, add forty grains hyposulphite of soda. Use, after fixing, one ounce of this to four of water.

Mr. Copelin, from the Committee on Convention, reported that a meeting was held, officers elected, and that the matter was wholly now in the hands of the proper officers, and that the circular with full information would be ready shortly.

On motion, report was received and Committee discharged.

A vote of thanks was passed for Mr. Densmore.

Mr. Anderson exhibited an improved position-chair, where the back can be raised

and lowered, also placed at any angle. An improved Bonanza plate-holder was exhibited by Mr. Anderson. The merit of both was recognized by the members.

Mr. A. St. Clair showed a simple and cheap retouching-frame, to be used either by day or night. By day using a ground glass, and at night substituting a porcelain glass and using a kerosene lamp.

An ordinary reading-glass can be adjusted in a tin tube to cover the negative while working. As the article seemed complete for the work intended, and its inventor said the whole cost was only \$1.50, it was voted a good thing.

The Secretary asked the attention of the association, and stated that, owing to a pressure of business cares, he found it impossible to longer retain the portfolio of Secretary, and respectfully offered his resignation. Relieved from the cares and responsibilities of the office, he would still retain the same interest felt thus far during the life of the association, and punctually attend its meetings, doing all he could to promote its welfare.

Complimentary remarks followed by the President, Messrs. Copelin, Green, Joshua Smith, and others, regretting the necessity of the change, and then, on motion, the resignation was accepted, and an immediate election to fill the vacancy ordered. J. E. Beebe was unanimously elected as Secretary.

On motion, a vote of thanks was passed for the retiring Secretary, which President Rocher tendered in a handsome manner.

The Secretary read an invitation from the Chicago Electrical Society to attend their session at the Grand Pacific Hotel, on the evening of May 20th. On motion, accepted with thanks.

On motion, adjourned.

G. A. DOUGLASS,
Secretary.

Much to the regret of the society, and of the fraternity at large, Mr. G. A. Douglass, who for the past ten years has so capably filled the position, at its last meeting resigned the secretaryship of the Chicago Photographic Association.

A most heartfelt and unanimous vote of thanks was tendered him by the society,

and the assurance that he would remain with and work for it, was received with much gratification.

J. E. BEEBE,
CHICAGO, May 6th, 1880. Secretary.

PHOTOGRAPHIC SOCIETY OF PHILADELPHIA.—Stated meeting was held Thursday evening, May 6th, 1880, the President in the chair.

Dr. Seiler, on behalf of the committee having the revision of the Constitution and By-Laws in charge, reported that they had procured a suitable book, and had the revised Constitution and By-Laws copied therein.

Mr. Barrington, on behalf of the Excursion Committee, reported that the canal barge "Zuleika" would not be available for the coming excursion, and that a change of plan would be rendered necessary. After considerable discussion on various routes, it was decided to hold an adjourned meeting to arrange the matter.

A number of permanent prints, from the establishment of J. B. Obernetter, of Munich, were sent to the Society by Mr. E. L. Wilson, and were examined with great interest. On motion, the thanks of the Society were tendered to Mr. Wilson for his kindness. On motion, adjourned.

C. R. PANCOAST,
Secretary *pro tem*.

The second monthly meeting of the Society was held Thursday evening, May 20th, the President in the chair.

Mr. Barrington, of the Excursion Committee, reported that a boat for the excursion might possibly be obtained, but he could not say definitely for a day or two.

A communication from the committee on relief of sufferers by the fire at Milton, Pa., was read.

In reply to an inquiry by Mr. Hewitt, Mr. Carbutt stated that gelatin plates were working well, notwithstanding the high temperature, a little care only being advisable in using the solutions as cool as possible. The use of alum solution was also recommended. Cistern or rain water was not suitable for gelatin work, spring water being much better. On motion, adjourned.

D. ANSON PARTRIDGE,
Secretary.

THE CONVENTION AT CHICAGO.

As our readers have already learned by our "extra" of 15th May, there is to be a convention of photographers in Chicago, beginning August 23d, and the gathering will undoubtedly be large. Chicago is the metropolis of the great West; Chicago photographers stand high in our art; a splendid programme is in preparation, we know; and those who have foresight sufficient to take them there will assuredly not "sell out" for ten times what the visit will cost them.

We can offer no new argument as to the *advantages* of association. On another page President Ryder gives us some excellent points on this score, and we cannot do better than refer you to them.

It is true "all in all" that there is nothing like *inter-communication*. It has been the cause of the world's growth from time's beginning. It has done more for photography than anything else, and photography will decline unless its votaries, in large numbers, frequently meet and rub together.

All good work in this world is aggressive. Weeds must be burned, bad and non-producing trees cut down, and poor soil ploughed under. In our art, the better informed must fight the ignorant and teach them, or else there will be no increase in the stock of good photographers. If the most skilled exclude their knowledge from the less favored, the next generation will go back to the old rut, and our art suffer degradation.

Conventions, then, are our hope. They have their objections. What is there of humanity that does not? But the great good they do is incalculable, if you will put yourself in the way of it. It is, therefore, incumbent upon every live photographer to aid this enterprise by joining its membership, and then by attending upon its conventions, if such a thing is possible.

Effort will be made to avoid all the mistakes of the old N. P. A. managers, and many new features will be introduced with a view to securing greater interest *from* the membership and greater benefits *for* him.

We are hand and hand with it (which we hope won't damage it), though, by the

line drawn, we cannot, as we understand it, become a member. We shall, nevertheless, work just as hard for it, and hope to be on hand at the opening of the first convention of *The Photographers' Association of America*.

A CALL FROM PRESIDENT RYDER.

THE National Photographic Association, organized in Philadelphia, December, 1868, gave to photography the most substantial impetus it ever received in this country. Hundreds of its members, who profited by attendance upon its meetings and exhibitions, will bear me out in this assertion.

It was the bridge over which many passed from mediocrity to excellence. It made more good photographers than any other, or all other causes, during the period of its active existence.

Now, again, is felt the want of such advantages as can come only of united association, free interchange of ideas, and comparison and study of the best examples of work by public exhibition.

Wide-awake Chicago takes the matter in hand, and success naturally follows.

On August 23d, next, will open in that city the first annual convention and exhibition of *The Photographers' Association of America*. Besides the routine business of the association, lectures by prominent scientists will be given; photographing by electric light; demonstrations in rapid work by gelatin dry-plates and other processes; also a life insurance company will be formed, under the management of the association, for the benefit of its members. A scheme for a happy "wind up" is also hinted at.

All who have visited Chicago will want to go, those who have not should surely take this time to do it. It should not be a question of whether you can afford it, but whether you can afford to do without it.

The time fixed is your dull season at home, and the natural time to go somewhere.

Aside from the grandeur of her buildings, Chicago presents strong attractions in her lake front, her magnificent parks and gorgeous boulevards. While she makes no

special claim to watering-place distinction, she possesses the requirements.

A happy and profitable week can be spent there. Let all make an effort to go; it is a good time to "resume."

Respectfully, J. F. RYDER.

GERMAN CORRESPONDENCE.

Photography and Art-Industry—Photography as an Art and Dilettanteism—Henderson's Developer for Gelatin Plates—The Ferro-Oxalate Developer—Alum in the Developer—The Difference between Colloid Emulsions and Gelatin Emulsions.

THE black art conquers, almost daily, new fields in the world of industries. That photography can be combined with printing processes, as with lithography, copper-plate printing, steel-plate printing, etc., is a fact well known long ago, but a new step in her career has introduced her in the art-industry as a decorative art.

We have here a heliographer, Mr. Falk, who copies drafts of ornaments upon asphaltic copper. The layer of asphaltum, as is well known, becomes insoluble in the light, and the copper plate, after it has been lighted and washed with oil of turpentine, represents the ornaments in metal, which is then etched in with acid. Steel plates may be treated in this manner also, and if these are hardened after the etching, the ornaments, obtained by etching, may be transferred upon brass or bronze by hard pressure between rollers, and in this way ornamented metal plates are produced. These plates can, of course, be bent to any shape desired, and thus we see flower vases, lamp stocks, plates of metal, all ornamented with the help of photography; also, indirectly, the latter may be employed. A "lichtdruck" is made, transferred upon metal, and etched. The acid, of course, affects only those parts of the metal which have not been printed on. Furthermore, it is known that the etched metal plates can be pressed upon paper, thus obtaining water-marks; and it is also an old fact that carbon prints can be transferred upon glass and "blown" in with the American sand-blast process. We have at present, here in Berlin, fourteen sand-blast establishments.

We must not omit to mention here the pyro-photography, *i.e.*, the employment of photography for making glass ornaments, which process is now extensively practised by Oidtunnann. I am convinced that this employment of photography in the art-industries will assume immense proportions, and what we see now in this respect is only the beginning of the beginning.

Do *dilettanti* in photography exert a useful or prejudicial influence? This question has been discussed recently in the photographic society at Frankfort.

Fears have been expressed there that the gelatin dry-plates introduced lately will prove a great incentive for dilettanteism, as now any *dilettante* might make good photographs with ease, thus lowering the art in the eyes of the public. Some even went so far as to demand of the dealers of gelatin plates, to exact much higher prices from *dilettanti* than from photographers. This amounts to the same as if painters would demand that paper, pencils, and colors should be sold dearer to the public than to the brotherhood of painters.

Dilettanteism in the arts has never yet hurt the genuine art; on the contrary, there are nowhere more *dilettanti* in the landscape photography than in England, and, nevertheless, nowhere else has landscape photographing attained a higher degree of perfection than there.

If you buy a violin, you are not yet a violinist; buying a dry-plate don't make you a photographer.

Some gentlemen who intended going to Africa called on me last week, and proposed to take some dry plates along. They had also commenced to dabble somewhat in photography. As long as I was with them everything went along first-rate, but as soon as they were left to their own exertions, they were soon to their wits' end.

They had no idea how to pose and light the person; preparing the apparatus for work and exact adjusting was a mystery with seven seals to them; they let the sun shine into their objective, under and over exposed, as chance would have it, and if, after much trouble, they had developed a negative, they did not know whether it was fit for use or not. "Well, then," said the gen-

tlemen, somewhat crestfallen, "well, then, photographing is not quite so easy as we thought." This example tends to illustrate my remark, that not everybody possessing a dry-plate can make good photographs "with ease."

I made it a point, the other day, to try Henderson's developer for dry-plates, and I found the same to be really quite excellent, and especially adapted to be used with dull plates, as it produces at once strong negatives without any intensifying. I prepare it as follows:

Yellow Ferro-Prussiate of Potas'm (1:8) 100 c.c.
Pyrogallie Acid in Alcohol (1:10), . . . 5 "
Liquor Ammonia, . . . 12 to 16 drops.

The ferro-oxalate developer is still here in use, in spite of the many drawbacks found in working it, so; for instance, it has been observed that after the mixing it soon becomes dull, discharging ferro-oxalate, and this happens especially when the so-called neutral oxalate of potassa used contains too much oxalic acid in excess. A little too much does not matter, but it must not exceed a certain limit. Eder recommends as the best mixing proportions,

Neutral Oxalate of Potassium (1:3), . . . 3 parts.
Sulphate of Iron (1:4), . . . 1 part.

At last Dr. Wolfram's collodion emulsion has made its appearance, and we can judge now whether it really is as sensitive as gelatin emulsions. Unfortunately, so far, all experiments were not favorable, the tested plates showing fog and indifferent sensitiveness. On the other hand, the number of manufacturers of gelatin plates is increasing all the time. Here in Germany we have three, while England possesses surely ten times as many.

In the interest of a scientific expedition, I had to test, the other day, the enduring capacities of the gelatin plate in a high temperature, and I observed the defect of frilling in a very marked degree, even in developing already, when the developer was too warm. Alum is said to be a good remedy against it, but many dry-plate people declare that alum should only be employed after developing, as in the developer it produced insensitiveness. I must state, however, that I added two c.c.

solution of chrome-alum (1:50) to one hundred c.c. of my developer, without observing any injurious effect, and I, therefore, can recommend a moderate addition of chrome-alum to the developer, to all those who work in hot climates; but I will add, at the same time, that it will be well to place the plate, after developing, in a saturated solution of common alum for two minutes, in order to avoid any frilling in washing.

The more attention is paid to the study of the gelatin plates, the more the distinctive features between them and collodion plates become apparent.

With collodion emulsions we all know that bromide of silver precipitated with excess of silver is more sensitive than when precipitated with excess of bromine. The reverse, almost, is observed in gelatin emulsions, excess of silver is here of little or no help; on the contrary, it produces red fogs. Also, the other sensitizers, which have such a beneficial effect upon collodion plates, have very little, if any, effect upon gelatin plates. I only observed that pyrogallie acid affects gelatin plates favorably, and this only when it is mixed with the emulsion before the plate is prepared.

On the other side, it is a curious fact that the sensitiveness of the gelatin emulsions is increased so much by ammonium, while with collodion it does not exert any influence, and that, further, collodion emulsions do not become any more sensitive by being kept warm for a longer time, while on the other side the sensitiveness of the gelatin emulsions is increased thereby from day to day. I have gone to the pains to study these differences very closely, and believe that I can now give sufficient explanations for most cases.

The main reason for these differences lies in the influence of the gelatin, which latter is by no means unchangeable and chemically indifferent, like a collodion layer, but, on the contrary, very changeable, and liable to be affected by different chemicals. So, for instance, nitrate of silver, when mixed to gelatin, remains combined with the same so tenaciously that it cannot be liberated again by ever so much washing, and the nitrate of silver remaining in the

gelatin causes the formation of fog in the gelatin with the alcoholic development, just as well as in a badly washed collodion emulsion.

Just as easy, the injurious influence of some sensitizers upon gelatin plates may be explained. Let us take, for example, tannin; this is a good sensitizer for collodion plates, because it does not affect the film injuriously. With gelatin plates, however, the film becomes thick and impenetrable for water, as also for the developer, and if tannin really was of service in lighting, it acts the more injuriously in developing, for which reason its sensitizing qualities cannot come into action.

Till now, it has been found impossible to make a collodion emulsion of the same sensitiveness as the gelatin emulsion, which fact may be explained by the existence of several modifications of the bromide of silver, as observed first by Stas. He discovered a highly sensitive modification, which he called granulous bromide of silver, and which is distributed so finely that it remains suspended in the water as a kind of a milk, its sensitiveness being so great that the dull light of a Bursen burner is sufficient, already, to blacken it inside of two seconds.

This sensitive modification is formed by boiling finely distributed bromide of silver, or by precipitating the bromide of silver from diluted boiling solutions. It is probable that prolonged warming will do as well as boiling, by which fact the favorable effect of the same with gelatin emulsions is explained.

But why does it not answer as well with collodion emulsions? Because here, probably, the bromide of silver exists in a different condition, which cannot be transformed into the granulous highly sensitive modification.

This is, in fact, not always practicable, even with gelatin emulsions, as observed by Dr. Szekeley, who precipitated bromide of silver, after Abney, from a watery solution, washed it, and distributed it in gelatin. He obtained a very equal emulsion, which, however, did not attain any higher degree of sensitiveness by prolonged warming, which goes to prove that, in that case, the highly sensitive modification of Stas was not formed. Now, if the bromide of silver obtained from

a watery solution has already other properties than that formed in gelatin solutions, we have no cause to be surprised if the bromide precipitated from alcoholic and etheric solutions of collodion has much more different qualities.

If we dissolve nitrate of silver in collodion—as is done by Warnerke—in order to make emulsion, we obtain a solution which is very liable to precipitate again the silver salt, which is dissolved with such great difficulty in collodion. I observed the formation of fine crystals already when the solution was only left to rest some time; and this transition from the liquid to the concrete form is the work of a condensing process. If the particles, in this condition, come in contact with brome ammonia, or the like, the bromide of silver formed thereby will appear in a much more concrete form than that formed in diluted, watery (as with Stas), or gelatin solutions. This higher degree of density, however, renders the chemical decomposition very difficult, be it through the influence of the light or through the developer.

Now, the question remains yet, in how far gelatin itself acts as a chemical sensitizer, *i.e.*, combining bromine.

I denied that fresh gelatin has any sensitizing properties, and the same is, in fact, more than weak; so that I inclined to ascribe its favorable influence (as collodion-plate coating) more to the loosening of the layer. Otherwise, however, it is with gelatin decomposed by digesting.

Dr. Lohse writes: "If a solution of gelatin is used to make bromide of silver emulsion, and the gelatin by itself has been kept warm at 30° for a longer period of time, a remarkable sensitiveness of the plate thus prepared will be obtained, without any further warming of the emulsion." Thus we can satisfactorily explain the peculiar behavior of the gelatin plates, by the existence of different modifications of the bromide of silver.

Very truly yours,

DR. H. VOGEL.

BERLIN, April 28th, 1880.

OUR next issue may be delayed a few days in order to give the last news from Chicago.

FROM A MILTON SUFFERER.

IN any great calamity, photographers generally have to bear a full share. At the great fire at Milton, Pa., one of our old subscribers met with great loss, of which he writes as follows:

"Your letter came to hand, and I will let you know how I am situated at the present time. On the seventh of April my brother came on from the west (Wisconsin), in time to lose his stock in the fire; but his household goods were saved, as the house was not in the burned district. We had just finished a new building, and had an operating-room forty feet deep, sixteen feet wide, north top, west side-light; and on the ground-floor we had our reception-room in the front, 16 x 20 feet; dressing-room, 8 x 9 feet; and on the rear end a finishing-room 16 x 12 feet, which gives you the size of our building, and one of the finest galleries in this part of the State. We just had the pleasure of moving into it on Friday morning; and as the fire broke out at the car shops we were taking our backgrounds in the side-light, which saved us the trouble of taking them off the frames, and as the flames came in our direction we let the grounds go, and just escaped with our lenses and one 8 x 10 box, a 11 x 14 box, and one 22 x 26 crayon picture. All the rest are in ashes. Our building was insured for \$600, and the stock we were going to have insured as soon as we had it all in the new rooms. Our loss is at least \$1600; total loss on building and stock, \$2200. We are making stereo. views of the ruins; will send you some as soon as we have them printed, and, if you will accept, we will make a set of negatives for the *Philadelphia Photographer*. All my books and journals are also lost. I am glad to hear that Philadelphia is raising contributions for us, as we are a suffering people.

"Yours respectfully,

"C. RIPPEL (Rippel Bros.)"

A REVOLUTION IN THE ROBINSON TRIMMER.

THE great obstruction to the sale of Prof. Robinson's most useful invention for trimming photographic prints has been the high price. It is so excellent and so valuable that

it is well worth all that is asked for it, and yet when a thing looks high, upon its face, the public turn aside from it without even a casual examination of its merits. Thus has it been with the little tool in question. It is composed of many parts, minute in size, which all require skilled labor to manufacture (the little wheel alone costing almost as much as the rest of the trimmer), and hence the cost of the resulting tool. However, the sale so far has satisfied the inventor as to his original outlay, and enabled him to perfect plans by which he can produce both the "revolving" and "straight cut" trimmers at a price very far below what it has heretofore been necessary to ask for them. The form has been modified, too, and thus other advantages secured. Our object now is only to announce these changes, with the promise to describe them fully in our next, with drawings of the new designs. Meanwhile we refer you to the advertisements. In every way the new tool is equal in capacity and excellence to the old one.

HOW GOOD PHOTOGRAPHERS WORK.

BY THEMSELVES.

WE have been acting as catechist ("distinctly American like") again, and have requested a few of our working photographers to give us their experience in answer to the questions which follow. We have already received some interesting responses, and, judging from them, we think much valuable information will result. This willingly *giving out* of their stores of knowledge is peculiar to the "American photographer," and we congratulate him on his good-natured generosity—but to the queries:

1. How do you supply yourself with distilled water for your bath?
2. How do you keep your solutions cool in hot weather and of equal temperature?
3. What is the best formula in your hands for bath, collodion, and developer, which work in harmony?
4. How do you keep your paper from turning yellow in hot weather?
5. What is the best way to wash prints where the water supply is small?

6. What is your method of lighting the subject ordinarily?

In answering, use drawings if you wish.

We now make this an open letter to *all* of our readers, and shall be glad to have their views in such measure upon these subjects as they have the time to give for the good of the craft.

THE RESPONSES.

FROM J. H. SCOTTFORD, E. LANSING, MICH.

In reply to your list of inquiries, I am happy to give you such information as I possess.

1. I obtain distilled water in the winter months, for bath and other purposes, from the condensation of the steam in the steam-heating apparatus of our State printing-office in Lansing. In summer, I use water from melted ice.

2. I shall have to illustrate my method of keeping solutions cool in hot weather by a drawing. I have built permanently, in the proper place in the dark-room, a box in two sections, a small upper section, and a lower and larger section, substantially as shown in the drawing. The bottom of the upper section is completely perforated with holes an inch or more in diameter, through which the cold air from the upper section can pass down to the lower section; also, the warm air from lower section rise to the upper section to become cooled by the ice.

I have a pail made in two sections, the

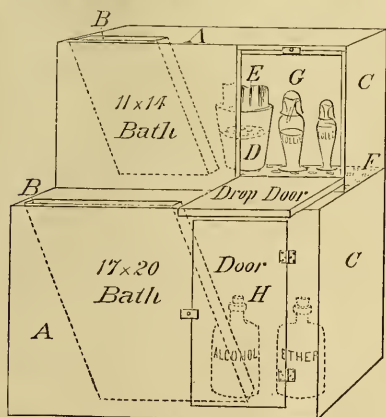


FIG. 1.

bottom of the upper section is pierced by numerous holes, through which the water

from the melted ice reaches the lower pail. I place in the upper pail from five to eight pounds of ice each morning, and place it in the upper section of the box. This will be sufficient to keep the two chambers at a temperature of about sixty degrees for twenty-four hours. The upper section contains the collodion and a small 11 x 14 bath; the lower section contains the large 17 x 20 bath, and the stock of alcohol and ether, and such other things as I wish to keep cool. In the drawing, *AA* is the box; *BB*, baths; *CC*, upper and lower chambers or sections; *D*, pail in two sections; *E*, ice; *F*, perforated bottom of upper chamber; *G*, door to upper section, which, for convenience, I have hinged at the bottom, and drops forward in opening; *H*, door to lower section.

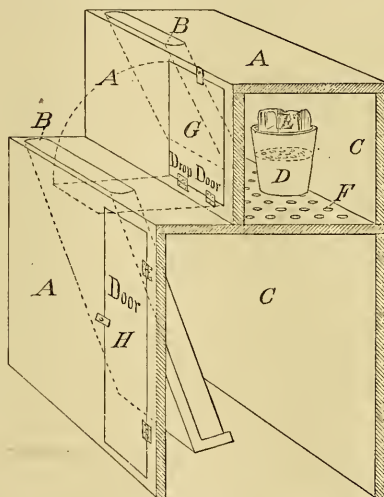


FIG. 2.

I have used substantially this chamber for about eight years, with uniform success. If heat is required in winter, a gas-jet may be burned in lower section.

3. I make my bath 40 grains strong of distilled water. If the silver is pure and neutral, and the distilled water fresh and pure, I only have to iodize my bath, which I do by leaving a plate in it over night, or over Sunday, if it is convenient. If, when the bath is first put together, the trial-plate fogs, I add a few drops of C. P. nitric acid to get an acid reaction, this I usually find sufficient; if not, I make the bath alkaline with ammonia, and boil for a few moments,

after which I cool and filter, and again make acid with nitric acid.

I make my collodion for the light now in use as follows :

- No. 1.—Alcohol and Ether, . . . Equal parts.
 Iodide of Ammonium, . . . $2\frac{1}{2}$ grs. to oz.
 Iodide of Cadmium, . . . $2\frac{1}{2}$ grains.
 Bromide of Cadmium, . . . $1\frac{3}{4}$ "
 Bromide of Potassium,
 or Ammonium, . . . $1\frac{3}{4}$ "
 Gun Cotton Sol. No. 2, . . . 4 "
- No. 2.—Alcohol and Ether, . . . Equal parts.
 Iodide of Ammonium, . . . $2\frac{1}{2}$ grs. to oz.
 Iodide of Cadmium, . . . $2\frac{1}{2}$ "
 Bromide of Cadmium, . . . 1 grain.
 Gun Cotton, . . . 5 grains.

When I wish a collodion of more intensity than No. 1, I add sufficient of No. 2 to produce the required result. No. 2 I use for copying.

Developer.

Double Sulphate of Iron and Ammonium, 6 ozs.
 Water, 72 "
 Acetic Acid, No. 8, 6 "

This developer can be weakened when desired; ordinarily, I use it of full strength.

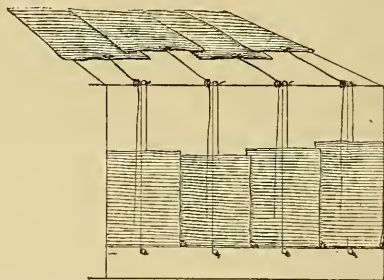
4. In hot weather I only have silvered the amount of paper to be used during the day, which I have dried by artificial heat, and immediately fumed; unless the day is unusually hot and damp, both, the paper will remain white until night, and frequently for one or two days.

5. When the water supply is limited I have the prints changed by hand, one at a time, from one dish of water to another fresh one, allowing every third change to remain standing about fifteen minutes, the others about five minutes. About six or seven changes of water I find sufficient, and the changes of from fifteen to twenty sheets printed in cards can be made in an hour.

6. Ordinarily, I light the sitter by massing the lights and shades, of course preserving the half-tones in both light and shade. I use the light at an angle of about forty-five degrees, employing, of course, only a small amount of direct light. I make but few "effects" known as Rembrandt, not deeming them desirable where strong effects are desired.

If you wish to know, by your inquiry,

how I arrange my curtains in ordinary lighting, I answer with a drawing.



FROM W. F. VAN LOO, TOLEDO, OHIO.

1. I do not use any distilled water, but get a nice clear piece of ice, melt and filter, and then add a few grains of silver to the ounce, and set in the sun until wanted for use. I have very little trouble with impure water that way.

2. My dark-room is so arranged that I have a very cool draught through it by doors opposite each other, one in a large hall and the other leads to my silvering-room, which is also a kind of hall between operating-room and printing-room. My bath I keep in a large box with a cover to it, and when very hot I wrap a piece of ice in an old piece of carpet or heavy cloth, and place it between the sides of the box and bathholder. My collodion I place in an earthen jar containing cold water.

3. My bath I usually make about forty grains to the ounce, but in summer as low as thirty. In making a new bath I use the ice-water I have described before, and which has been sunning two or three weeks, or more, which I make slightly acid with C. P. nitric acid, and iodize by leaving an 8 x 10 plate (coated with collodion) in over night. Should the bath streak by not being sufficiently iodized, I put another plate in, but find an 8 x 10 plate will generally do for a 11 x 14 bath. I use three baths, two in use, and one sunning all the time. My collodion I like as well as any I have tried.

Formula for Collodion.

Iodide of Ammonium, . . . $4\frac{1}{2}$ grains.
 Bromide of Cadmium, . . . $1\frac{1}{4}$ "
 Bromide of Potassium (dissolved
 in least possible quantity of
 water, $1\frac{1}{4}$ "
 Cotton (Anthony's), 5 "
 Ether and Alcohol (equal parts), 1 ounce.

Developer.

Protosulphate of Iron, . . . 4 ounces.
 Water, 64 " or
 30 grains by the hydrometer.

I usually test the iron, to be more certain of strength. To each six ounces of iron solution I add about two ounces of acetic acid, enough to flow nicely.

4. On this point I am in need of information myself. I use my positive bath neutral in summer, sometimes acid; but generally try to have the paper used the same day as floated. What I cannot use I put in a large book, and I find it keeps a little better than in a box or hanging up.

5. "What is the best way to wash prints where the water supply is small?" I cannot answer, as I have always worked where water-works were at hand, and use plenty of water. I wash my prints in acid water first, then thoroughly wash before toning. After fixing, I place in a large wooden tray, and run a rubber hose from the water-pipe to the bottom of the tray, and let water run in, and draw it off with a syphon. I leave the prints in water over night.

6. My operating-room runs east and west, with north light; the place I use most for bust picture sittings is the southeast or southwest part of the room, with sitter pretty well under the light, using top screens of white muslin; my camera near side-light. This is my most ordinary place for sittings, but use pretty much all parts of my room.

The above answers are about as well as I can state them to you. If you can use them, I shall feel perfectly satisfied in writing them.

(To be continued.)

WHAT PHOTOGRAPHERS SAY.**THE MEGATYPE PROCESS.**

I hope you do not indorse the glowing representations of the "Megatype" company, with Lambert at the head of it. Any one that pays his money for the process will find himself "stuck." The best megatypes they (the company) have to show are miserable affairs; misty in the shadows; of a nasty slate color, like all common collodion positives or transparencies. The process is nothing more than the old "photo-crayon"

fraud, only transferred to paper. The only merit to this *wonderful* discovery is the ease and rapidity with which they make the transfer; but no intelligent photographer would expose it to the public as a specimen of good work. Any one can see how they look by making a wet collodion transparency and laying it on white paper. When Anthony's *Bulletin* spoke so highly of these works of art, I *thought* the great *Dick Deadeye* must be in the play somewhere; sure enough, I found him in the captain's office when I made my visit to the megatype headquarters. This *may* have prejudiced me.

Yours, J. H. FOLSOM,
 Danbury, Conn.

THE ARTOGRAPH OF MR. OSBORNE.

I received by mail this morning a circular from William D. Osborne & Co., together with a card specimen of their artograph patent process. Now, sir, it looks to me that *one hundred dollars*—their modest demand for shop-rights—is somewhat extravagant for being shown how a thing is done, for I venture to say that not one photographer in fifty could do it after having seen how. The man or woman who could do this work must be more than a photographer; they must know how to draw; must have a knowledge of perspective, also of design, in short, be an artist in the true sense of the word.

Gilbert & Bacon's pictures which you published were the first I had seen showing etching. I have done considerable since, and can make some pleasing effects; yet, I would recommend, above all other things I have yet seen, Seavey's backgrounds and accessories; though I do not use them myself, for I paint my own, but I do so for economy's sake; if I could, I would much rather use his, because of their soft harmony.

I have said my say; this being my first, and probably my last, by way of a caution to those who look upon the pretty picture in the circular, and think they can go and do likewise. I tell you, gentlemen photographers, you cannot do it unless you can already take your pencil in hand and, on an 8 x 10 card, produce a picture fit for framing.

Very respectfully,

P. HANDSOME.

Louisiana, Mo.

"NOTES FROM AMERICA."

Under this head I find the following in a late issue of the *Brit. Jour. of Photography*:

"For some months past each number of the *Philadelphia Photographer* has contained, under the heading 'How Business is, and What of it?' a number of letters from leading photographers in all parts of the United States, being replies to a circular letter sent out by the editor, propounding a number of questions on matters connected with the art. This is a novelty in journalism purely American, and the following list of queries will give an idea as to how it would 'go down' in England." (Here a list of your queries follows), and then our friend of the *British* adds: "Judging by the very lengthy replies made by many of the recipients of this circular, we should imagine that the first question is sufficiently answered; for, were business in a satisfactory state, there would be less time for writing."

Now, I rather like this "purely American." Thank heaven our thoughtful editor is "purely American," and "*long may he wave*." As to the business condition, though, our cousin British errs. We are busy, but it is also "purely American" to sit down and write what may help a fellow-laborer any time, between plates, or even at the expense of sleep and rest. We are not only "purely American," but *generous* Americans. There! how will *that* "go down"? Come to our Chicago convention and see us as we are. We will cheer you up.

AMERICAN.

THE TRUE WAY.

Mr. Lafayette W. Seavey feels a great interest in our pictures, and deplors with us that photographers generally do not, simply for the public popularization of our art, if for no other reason, take more pride in supplying us with fine negatives for "our picture." We reported to him how we had offered golden prizes of money and medals, and of how much persuasion we have used, and he answers, "The way to get fine negatives of any subject you like is to *make them yourself*. How is that for a suggestion?" Very good, and we have tried it, but it would supplant one of the most useful features and intents of our magazine—

namely, the supply of good work from the craft itself for its own study and good.

MR. GUTEKUNST'S PICTURE OF MISS DETCHON.

Apropos of what Mr. Seavey says, if photographers could see the many letters of praise, and the commendatory *press* notices that have been sent us concerning Mr. Gutekunst's pictures of Miss Detchon, in our April issue, the demand for *picture* space in our magazine would be greater than we have to give. One of the most gratifying of these testimonials came from our new and esteemed Paris correspondent, Mons. Leon Vidal, as follows:

[Translation.]

"MY DEAR MR. WILSON: My very sincere compliments for the handsome photograph by Mr. Gutekunst, published in your last number (April, 1880).

"It does honor to its author, and to the journal that published it. I read, in your article that alludes to this remarkable illustration, that seven different negatives had been taken of this same person. Could you not, *at my expense*, send me, unmounted (or mounted, as you wish), one of each of these pictures? I am chairman of the committee which is occupied in demonstrating, here, that photography may be considered as an art; and these copies would be very valuable to me.

"Oblige me, however unimportant my congratulations may be, to transmit them to the able Mr. Gutekunst.

"Let us leave the name of *photographers* to operators, and let us call by the name of artists men who, aided by photography, can perform such work.

"Yours very devotedly,

"LEON VIDAL.

"PARIS, April 14th, 1880.

"P.S.—I will say what I think of this picture in *Le Moniteur*."

MR. CHARLES W. HEARN has bought out Mr. J. M. BECK, Portland, Me., and is now ready to continue the business at the old stand, under his own name. Mr. HEARN has been connected with some of the best galleries in Philadelphia and Chicago, gaining thereby much in knowledge and experience in the photographic art. We wish him all success.

Editor's Table.

PICTURES RECEIVED.—Two fine cabinet photographs from Messrs. RIEMAN & TUTTLE, San Francisco, Cal., showing great taste in lighting and posing. Good pictures throughout. Several cabinet specimens from Mr. E. D. ORMSBY, Oakland, Cal. Our readers will remember that Mr. ORMSBY, not very long ago, left Oakland, to try a business life in San Francisco. He has now returned to his old stand in Oakland, and is permanently settled in his new gallery, built expressly for his use. From Mr. E. A. SCHOLFIELD, Mystic River, Conn., a very clear, soft card vignette of a lady. Stereoscopic views of Dixon, Ill., and vicinity, from Messrs. KEYES & CHIVERTON, Dixon Ill.; also two cabinet portraits. One of them—a portrait of an old gentleman—is very excellent, the subject having been treated with much care and skill. Messrs. SCHOLFIELD BROTHERS, Mystic River, Conn., send us a couple of card pictures of ladies. Mr. C. J. SNYDER, Topeka, Kansas (formerly of Parker City, Pa.), sends us specimens of his cabinet pictures printed in horse-shoe medallions. The effect is unique, but a little heavy. Cabinets from Mr. S. B. SMITH, Marshall, Mich. Mr. KIDNEY, operator for Mr. C. D. MOSHER, Chicago, Ill., favors us with some samples of the fine work produced in that establishment.

MESSRS. BATES & HODGE, Denver, Col., have lately moved into their new gallery, and are now prepared to carry on their large business in a more extended manner, their new place being fitted up with all the latest and most improved conveniences in every department.

BEGINNING May 9th, and ending September, 1880, is a splendid art exhibition, held at Dusseldorf, Germany, where photography is well represented. We are promised particulars from Dr. E. LIESEGANG soon.

We clip the following from a New Orleans daily. "On Sunday evening last, being the fifteenth anniversary of the birthday of our esteemed friend and renowned photographer, Mr. THEODORE LILIENTHAL, he was made the recipient of a handsome silver pitcher by his employees, as a testimonial of their esteem and appreciation for his unbounded kindness and the great interest he takes in their behalf. We understand that Mr. LILIENTHAL, in accepting the present, expressed his gratification for this mark of regard, and felt highly pleased with the demeanor and labors of his employees."

AMONG the treats of Chicago will be a first-class lantern exhibition and lecture on art topics, by T. J. MAPES, Esq., of Chicago, who is famed as a lecturer. The Heliotype Company, Boston, are preparing a beautiful certificate of membership for the Association.

Mr. J. C. SOMERVILLE, dealer in photographic materials, chemicals, and apparatus, St. Louis, Mo., sends us his latest catalogue. It is, emphatically, the largest, handsomest and most complete price-list in the photographic line. It is the same size as the *Philadelphia Photographer*, and contains one hundred and eighteen pages; is profusely illustrated with cuts of every style of article found in a first-class stock-house. These illustrations are all accompanied by full descriptions and prices for the various grades. The whole is printed in clear, clean type, on good paper. Altogether, it forms a catalogue to be proud of; and we trust the care and labor spent in preparing it will be amply repaid by an increase of custom.

A BATTLE is impending between the present and late owners of the artotype patent and one of their most prominent licensees. The latter is the complainant, and writes—"I mean business, and am in no fooling mood over this thing." Among the rest, a summons has already been served upon LAMBERT.

MOsaics, 1880, are all gone, and we want a few copies. Any one having a copy to spare will be given fifty cents for it at this office.

A LATE number of the *Jewish South* publishes some very just strictures upon parties who would discriminate between Jew and Christian in matters photographic, Mr. GENTILE and his publisher, Mr. FITZGIBBON, coming in for their share. Mr. THEODORE LILIENTHAL, New Orleans, La., asks us to say that he will be glad to send a copy, free, to every photographer of the Jewish persuasion.

THANKS to some unknown friend in San Francisco for extracts from the *News Letter and Advertiser*. Almost too personal for our use.

THE photographers of Philadelphia came nobly to the relief of the sufferers of Milton, Pa., the burned city.

AN extra of the *Philadelphia Photographer* was issued May 15th, giving the announcement of the "Photographers' Association of America,"

and other useful matter. Copies free, as long as they last. The convention opens August 23d. There will be some hot discussions.

READ our advertisements. There are several new ones this month, and we do not think they will tempt you to part with your money for nought.

MONS. LEON VIDAL, editor of the *Moniteur de la Photographie*, now becomes our Paris correspondent. We are fortunate in obtaining such an important addition to our staff, since Mons. VIDAL is not only one of the best known and the most talented author in photography in France, but he is one of the most zealous champions of photographic art. The regret we have in losing Prof. STEBBING is largely compensated for by his able successor.

At the meeting of the Chicago Electrical Society, held May 20th, the Photographers' Association were in attendance, by special invitation, and the subject of one of the lectures, by H. G. PEABODY, Esq., was *Photography*, illustrated with the electric light.

THE MEGATYPE, advertised in our pages, is first an enlarged transparency, similar to the "photo-crayon" of years ago, then transferred from the glass to prepared or collodionized paper or porcelain or canvas, as the desire may be. We saw one made as far as the transfer, and the manipulations seemed easy and certain. As announced, by a change in the treatment, various tones may be obtained, from a weak gray to the warmest sepia, and of a mat or a glazed surface. The colored ones we saw are remarkably pretty. The process enables the photographer to use his negatives for large or small prints, plain or colored, and will give those who cannot afford a large bath a new chance for making money. It will not, however, make you suddenly rich, or coin money for you; and the pictures need care, skill, and taste to make them good. Go at it carefully and thoughtfully, if at all.

A SPLENDID COLLECTION OF LICHTDRUCKS.—We have received, from Mr. J. B. OBERNETTER, Munich, Bavaria, between one and two hundred examples of lichtdruck printing of various kinds, and in size varying from 4 x 5 inches to 12 x 17 inches. It is the finest collection, we think, we ever saw. As to subject, the variety shows to what a wondrous extent this art is applied and used on the Continent; for here are pictures of statuary, paintings, drawings, engravings, marbles, metal ware, furniture, hardware, bric-a-brac, landscapes, figures, and what not, both

with mat and varnished surfaces, of a great variety of tints, in imitation of the colors of the originals, including one very pretty print in a delicate blue tint—a copy from a crayon drawing. The work is, of course, most excellent; for no one is a more skilled adept in this means of printing than HERR OBERNETTER. There are no portraits included in the collection, which shows, doubtless, that, in the country of the birth of lichtdruck, the process is not largely applied to portraiture. We have shown these prints to our Photographic Society, where they elicited much praise. They are at our office now, where any one will be welcomed to examine them. Besides being interesting as examples of the photo-mechanical printer's skill, there are some fine studies in negative work, such as we do not often see in one collection. An immense business is done in this line by HERR OBERNETTER; but his countrymen seem to appreciate his art more than our tradespeople do here.

A NEW ASSOCIATION.—Under the name of "Association of Operative Photographers of New York," a number of photographers' employees have joined together, with the object to improve personal relations among themselves, to mutually assist each other in cases of need, to inform each other of possible vacancies, and to give advice and assistance to obtain situations, when out of employment. The discussion of scientific photographic matters is an essential part of their programme. It is not, as it has been rumored, the intention of the Association to form itself into a so-called trade-union, or to attempt to influence the relations between employer and employee; for all its members are fully aware that capability, diligence, and an unblemished character alone can secure remunerative and permanent positions. These principles actuate the Society in being select in the adoption of its fellow-members. The officers of the Association are: Mr. CH. T. HENDRICKSON, with Mr. JORDAN; Mr. CH. B. SHADNER, with Mr. FLADE; Mr. CH. EHLMANN, with Mr. HENRY MERZ; Mr. VICTOR ACKER, with Mr. JORDAN; Mr. CH. COFFIN, with Mr. JORDAN; Mr. OTTO BUHLER, with MARC & SHUM; Mr. CH. HAUSRATH, with Mr. BOGARDUS.

The meetings are on the first and third Wednesday of every month, at Beethoven Hall, Fifth Street, near Bowery. Communications to the Association will be received by the Secretary, Dr. CH. EHLMANN, 360 East 116th Street, corner 1st Avenue.

We wish the new society great success, and hope to hear from them often. They can be the means of doing a great deal of good.



J. R. GOUBIE,

PARIS, FRANCE.

LUNCH AUX RUINES DE LA HUNAUDAYE.

T H E

Philadelphia Photographer.

Vol. XVII.

JULY, 1880.

No. 199.

Entered according to Act of Congress, in the year 1880,

By EDWARD L. WILSON,

In the office of the Librarian of Congress, at Washington, D. C.

OUR PICTURE.

THE example we give our readers this month, of an outdoor group, is for the especial benefit of those photographers who, when going on an excursion in pursuit of pleasure and rest, take with them camera and apparatus, and spend the hours of recreation in working like beavers to secure a good set of negatives of the picnic parties of their friends. To these, and all others who may be called upon in similar cases, we would recommend our picture as a guide and model worthy of the most careful study.

The perfectly easy grouping, the graceful poses, suggestive of both action and repose, all combine to form a most beautiful and harmonious picture.

True, it is "a work of art,"—a painting by one of the most celebrated French artists,—nevertheless, its perfect naturalness will recommend it at once to the thoughtful photographer as a guide well worthy of being followed. Of course, we have no hoary ruins such as these,

"Remains of rude magnificence,"

but our land does abound with noble hills and mountains; grand old trees and towering rocks, many of which would form a background as picturesque as the one chosen by the artist in this case; where, in placing the party

"Before a venerable pile,
Whose turrets viewed afar,"

he has succeeded in throwing out the figures in bold relief.

The Castle of Hunaudaye is one of those charming ruins with which France, as well as many other countries, abounds, still standing mute witnesses of the grandeur of past ages of luxury and wealth and war.

The words of the poet, written upon other ruins, are fully applicable here:

"It was a wide and stately square,
Around were lodgings fit and fair,
And towers of various form,
Which on the court projected far
And broke its lines quadrangular.
Here was square keep, there turret high,
Or pinnacle that sought the sky."

The original painting is by J. R. Goubie, Paris, France, and is owned by Mr. Charles L. Sharpless, Philadelphia, who kindly loaned it to us for this express purpose. Mons. Goubie is so well known in the art world that any comment from us upon his composition would be superfluous. Suffice it to say, we considered ourselves fortunate in thus securing one of his exquisite pictures for the benefit and pleasure of our readers, and we feel certain they will all join heartily in our thanks to Mr. Sharpless for allowing us this privilege.

The negatives and prints were made in our own rooms, upon the double-brilliant Dresden paper imported by Mr. G. Gennert, New York, and sold by all the dealers, we believe.

PHOTOGRAPHIC ITINERACY.

DURING the warmer months, many photographers, who have to depend upon a farming populace for their business, find it very dull at home, and hardly know how to put in the time.

A correspondent in Missouri—Mr. R. Goebel—who always looks upon the cheerful side, and who is always busy, sends us a synopsis of his plan of improving the time, of making it pay, and, at the same time, securing needed change and recreation. He writes us as follows:

"I have been making, for the last three years, every spring and fall, a trip to small towns of this and adjoining counties. Some of them I make by railroad, some with two horses and spring wagon. On the latter I put my photoperipatetigraph-box. The seat in front is also a box (rather trunk). Those two boxes hold my whole outfit. When I get at my destination, I use the photoperipatetigraph as dark-room; take it indoors most the time. When very cold, and no stove handy, put partly in the sun, so it will get right temperature for the chemicals. On the railroad trips I take the box also along. I generally put up a tent on north side of building, if possible, or on open porch.

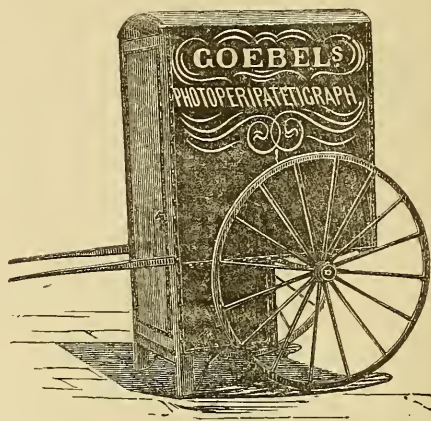
"I make nothing else but negatives; get paid for all work in advance; send photographs, when finished, by express, to the post-masters, to distribute.

"We will be busy for the next three weeks to come. I brought home about one hundred and fifty negatives (mostly *cartes*), and was gone about ten days. Since last fall, I have made over one thousand negatives. I generally stay at one place two or three days. The centre of my tent I keep open, for light, which I can work both ways. To soften the light, when the sun is bright, I use spring-rollers, with bleached cotton curtains, which work very well.

"I cannot make, in a temporary gallery, as brilliant negatives as in my home place, but still can make pictures which are good enough to have my name on them.

"I had only a boy along to hand me the plates. I made last week, at Wentzville, in one day, fifty-four negatives, mostly of babies and children."

Mr. Goebel described his photoperipatetigraph in our magazine, several years ago; and as fresh inquiries concerning it have been frequent of late, we reprint his article, as it will serve many who may want to follow his example:



"Mr. Goebel calls this his 'Photoperipatetigraph.' Do not look in the dictionary for it, because it is not there.

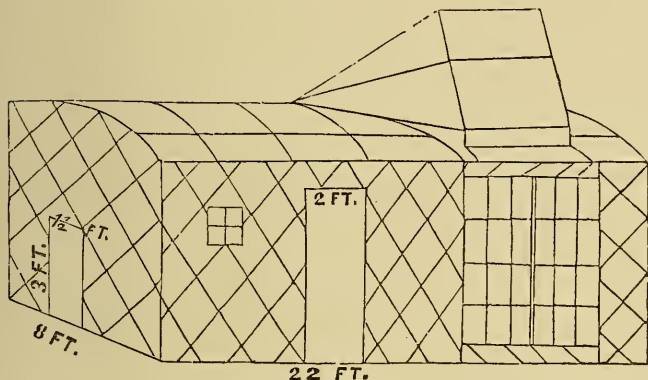
"It is large enough to hold all the apparatus and instruments for out-door work, and can be moved about *a la* push-cart, by one man, with the greatest ease. Its construction is so simple that a description is hardly needed. The body is 3 feet wide, 3 feet 10 inches long, 4 feet 3 inches high from bottom to top at the front end, and 6 feet from the ground to the top at the back. The shafts project 3 feet 4 inches from the body, and the whole is mounted on carriage-wheels. The front end is supplied with a 10 x 12 orange-colored glass, which admits all the light necessary.

"The internal arrangements may be made to suit one's self. Drawers for the instruments; shelves for the bath, pans, etc.; pockets for the bottles; and a place for everything, and everything in its place, are all required to furnish it. The covering is black oil-cloth, which is a good protection, and keeps out the light. For those who are not too proud to push it around, it will be found an excellent contrivance."

A number of inquiries have come to us recently, too, as to the best method of building a portable car. Such a one as we de-

scribe below would be found useful where a photographer can have a regular circuit from year to year. In June, 1871, page 169 of the *Philadelphia Photographer*, we find the following:

"Some time ago, I saw, in the *Photographer*, an inquiry as to the best mode of



building a photographic car. I have one which I think is just right, and gladly send you a description of it.

"I first laid the sills, and bolted them. There are five. The two which are bolted at the bolsters are 2 x 6, the other three are 2 x 4. I then put in cross braces, made of 1-inch boards, ripped 2 inches wide, and then laid the floor. Next I put up a frame, made of the same stuff, like the diagram. Where the strips cross they are halved, and a screw put in. They are also screwed at the top and bottom. The roof is bowed with a pitch of 8 inches. The frame is then covered with felt-paper and half-inch sliding running up and down, and matched. Where the boards cross the frame there are two screws in each crossing. The car is smooth on the outside, which gives a better chance for fancy painting. The roof is covered with half-inch stuff; then a layer of tarred felt-paper, then a layer of half-inch stuff on that again, and well painted with mineral paint, both between the joints and between the paper and outside covering, and then four coats of the same on the outside. There are two side windows, north and south, and skylight facing north. The side windows are two common sash windows, side by side. The glass is 8 x 14. The

skylight is 5½ x 7 feet. The rear is raised, when in position, 4½ feet. There are two doors for entrance on each side; also a small door in the forward end, to accommodate the driver when moving. The truck-wheels are 30 inches in diameter. The forward ones 2 feet from the end, the back ones 4½

feet from the rear end.

The skylight is 3 feet from the rear end, and pitches to the side. I think this gives a better light, and the car is not so much in danger from the strong west winds. I had a car blown over and smashed, last summer, and that put me somewhat on my guard. The side windows are 3½ feet from the rear end of the car, and 1 foot

from the floor. It is 6 feet from the side-light to the door. The dark-room is 3 x 4½ feet, and the work-room 4½ x 5 feet. The car is 22 feet long, 8 feet wide, 7 feet high at the eaves. It took four thousand screws to fasten it together. It is lined inside with quarter-inch stuff, and papered with wall-paper, ceiled overhead with the same, and painted drab.

"C. N. STEVENS.

"PROPHETSTOWN, ILL."

LEARN MORE THAN ONE BRANCH OF PHOTOGRAPHY.

BY J. PITCHER SPOONER.

ONCE upon a time, a photographer wrote a notice as follows:

"WANTED.—A young man able and willing to work, who understands photography from sweeping a floor to operating, retouching, printing, toning, etc. No situation given to tobacconists or samplers of ardent spirits, but an honest man wanted, after such a date, by ————."

The notice was posted in a well-known stock-house, frequented by those who now and then seek a situation. The writer of the notice knew from experience that the

article of perfection required did not grow on every bush, and was far from surprised when seekers of a situation in one particular branch turned up a thumb at the requirements of the notice; nor yet when the expressions of "He wants a scavenger and photographer to be identical;" "What has floor-sweeping to do with photography;" "He never will find a man to fill that bill."

And yet we may look through the list of professions and trades, from the blacksmith to the clerk at A. T. Stewart's Dry-Goods Palace, and never find such expressions as those recorded above come from any one in want of a situation in the various trades. Why is it thusly? Simply because our young people are started wrong; they start at one thing, and, it is feared, have not capacity to learn more than one or two at best.

Did Elbert Anderson raise the cry of "scavenger" when William Kurtz asked him, "What can you do?" Not very much. He simply said: "Clean yonder window for you, sir." And up went his sleeves; and he not only cleaned it, but did it well.

If the truth were known, is it not more than anything else attributable to this feeling that has brought ruin to so many of our craft of late? our tendency to be over-particular as to what we do for our employers?

When asked, "Why is not this dressing-room in order?" when sitting close by all the confusion made by a happy mother and seven babies, instead of saying, "That lazy scavenger-boy Joe is not around," would it not be as well to pitch into the confusion, and restore it to order, and earn at least the commendation of your employer as well as a slight portion of your healthy stipend?

It may be that the aristocracy of our employees (keep your seats, gentlemen and ladies; I'll get you all there on time) have overlooked the example of the party Anderson; and it takes so much time to look after Joe, that the few hours a day we are at our post are much reduced in size. Much can be done in early hours, before business commences, and at eve, after the rush is over.

Believe me, those of you who think this may hit you, when I say it will not hurt you

at all, but, on the contrary, make you all the more useful to your employers, and detract nothing from your dignity as *artist*, *operator*, or *printer*, to say nothing of the ten years' growth out of which "Joe" will be scared at the surprise of such actions. And, young man, commencing our craft, one word for your special benefit. Learn the whole of our business; do not rest easy with a paltry "one part of the play." Dry-goods clerks wait on our most eminent ladies and gentlemen, get good pay, and are all good sweepers.

PHOTOGRAPHY AT BELLEVUE HOSPITAL.

A FEW weeks ago we enjoyed a most interesting visit to the photographic studio of Professor Oscar G. Mason, located within the limits of the renowned Bellevue Hospital, New York. While we do not propose to detail all that we saw, we want to mention a few of the things that photography is doing for science in the skilled hands of Professor Mason.

The photographic establishment is, of course, complete in all its accoutrements and arrangements in every respect, or such an accomplished veteran could not therein exist. All the necessities for portraiture, copying, enlarging, the making of transparencies for the lantern, and printing, are there complete, with a fine library of works pertaining to photography, art, science, astronomy, and surgery.

The work done by Professor Mason and his assistants is varied in its nature, and, so far as hospital cases are concerned, embodies the following classes:

Surgical cases, before operation and after operation, to show the method used; and again on the discharge of patient, to show the result of the treatment.

Surgical apparatus, appliances, and instruments, and their use.

Abnormal formations, distortions, etc.

Crystalline and botanical substances used in medicine.

General and microscopical views of morbid anatomy.

Illustrations of fresh and prepared pathological specimens.

Progressive stages of decline or recovery.
Appearances produced by various remedial agents—medical and surgical.

Illustrations of clinical lectures.

Unknown dead at the morgue.

Normal formation, external and internal.

Hospital construction and changes.

At a large establishment like Bellevue, this is no little of an undertaking, and yet Professor Mason has managed to do it all for the last twelve years or more. Moreover, this is largely a labor of love, or it may indeed be called a work of charity, for no direct compensation follows it. It was one of his long-ago theories that photography might be made an important adjunct in the treatment of disease, especially by illustrating *methods* and *results*. This theory he has most fully demonstrated, and made his art indispensable in the directions already named. And since he began, how very wondrously has photography asserted itself, and made a place among the sciences, until now it is one of them.

And yet all this is only part of Professor Mason's work.

Previous to his occupation of quarters at Bellevue, as early as 1865, he was engaged in carrying forward the astronomical work of L. M. Rutherford, Esq., the infinitely small microscopically and the infinitely large astronomically. This latter work, as well known, includes the grandest photographs ever made in the—yes, *in* the world, but not of the world—of the moon and the mountains thereof; and of the stars, and the spots upon the sun, and of the solar spectrum. It is Professor Mason's business to print from these negatives, and his products are now displayed in the largest and greatest scientific and educational institutions in all parts of the world.*

No observatory is now looked upon by astronomers as fully equipped without a set of these wonderful photographs at hand for study. In fact there, are *very* few first-class observatories where some of them may not be seen.

Thus, day by day, our scientific photographer plods along, oscillating between the

telescope and the microscope; the spheres above and the bones below; the flesh and the blood—the pathetic and terrible, which make up the *omnium gatherum* of a great hospital, and the medical schools of a great city. His work during the last eleven years has brought him into immediate relations with the most eminent men of science, and his fame among them is as honorable as it is deserved. He has now been in the light-painting business over thirty years, and yet, as he told us, "some new problem comes up for solution almost daily; for photography is a profession in the practice of which there is *always* something to learn." He began playing with sunbeams when he was only twelve years old, and resolved then, when watching the revolutions of the buff-wheel in his native town, to be a picture-maker. He afterwards studied with the owner of that same buff-wheel, and his antique ancestry, dropped down from two hundred years before, thought his eternal condemnation was secured. They were almost right at one time, for he operated for "old Bromide Cutting," who since chiselled so many of us. Afterwards he was head operator with Meade Brothers, then two years with Rockwood, of New York, then in business for himself; afterwards standing sponsor to photo-lithography in America, and then into the life we have just described, where, we trust, he may be allowed many more years of usefulness.

WHAT PHOTOGRAPHERS SAY.

BUSINESS prospereth with our neighbors, as witness the advertisement—or a part thereof—of one:

"The old, the young, the rich, the poor,
In crowds are rushing in our store,
Fine work, low prices, extra speed,
Is why our galleries take the lead.

"The finest cabinets are made,
At prices to the lowest grade,
Fine portraits, both on card or tin,
Marked down at prices sure to win.

"Then come the babes, some cross, some mild,
Music hath charms to drive us wild;
But patience conquers, then they're tamed,
Until their photograph is framed."

Not copyrighted—but useful.

* No orders have as yet reached him from the celestial bodies. There has hardly been time since they were taken.

ABOUT THE PHILADELPHIA PHOTOGRAPHER.

The Boston *Transcript*—the editor being an amateur lover of our art—says :

"The *Philadelphia Photographer* for May has just come to hand. No periodical published in the interests of the photographic art in America can compare with this in importance and value. Its editor, Mr. Edward L. Wilson, is a practical artist of long and thorough experience and of progressive ideas, whose whole time and energies are expended in the task of making the magazine perfect in all its departments. Each number contains practical suggestions to photographers, papers upon photographic art, instructions in new processes, and a variety of other matter germane to the art. Beside the text, each issue includes an exquisite picture by some eminent photographer. The *Philadelphia Photographer* is now in its seventeenth year, and is a necessity in the rooms of every wide-awake photographer. Published by Edward L. Wilson, Philadelphia, at five dollars per annum."

HOW MR. KURTZ DOES IT.

Perhaps, if you print the circular below, it may give backbone to some others.

X.

Special Notice.—"All plain photographs must be paid for, invariably, in advance.

"If, in criticising proofs, expression and position are found satisfactory, no attention need be paid to heavy shadows, strong lines, spots, etc., all of which will be remedied by the finishing.

"Should the proofs not be satisfactory, another sitting is earnestly solicited. In those cases where the proofs have been sent to the sitter, it is absolutely necessary that he bring these with him, so that the artist may examine them, in order to avoid introducing the objectionable effect in the second sitting.

"All proofs must be returned within ten days from time of sitting, or the negatives will be destroyed.

"Should the proofs be found satisfactory, *one view only is finished; additional views, one dollar each.*

"Parties residing out of the city may

have their pictures sent to them either by mail, or by express, at their own risk and expense.

"Two weeks required to fill an order, from the time the proofs are returned.

"Negatives, of which orders are given, are preserved three years.

"W. KURTZ, Photographer,
"Madison Square, N. Y."

TWO WAYS.

I notice there are two ways of conducting a magazine. A. To fill it with matter useful to its readers, charging them a fair price for it, and accepting only such advertisements as do not interfere with their interests, or cause them to be swindled; and B., to fill it with all sorts of twaddle and personal malediction, of no interest to any one but the editor, and to crowd it with whatever advertisements come along. No matter who they harm, so they bring grist to the mill of the publisher of so much chaff. Lookout for yourself, Mr. Editor; for we watch you.

MANY SUBS.

Liquid India-Ink.—When India-ink is kept in a liquid state it soon becomes worthless, from the fact that the gelatin which it contains decomposes. A little glycerin added acts as a preservative, and causes the ink to flow well. Too much glycerin will prevent the ink from drying, and in this case it is, of course, easily blotched or smeared.

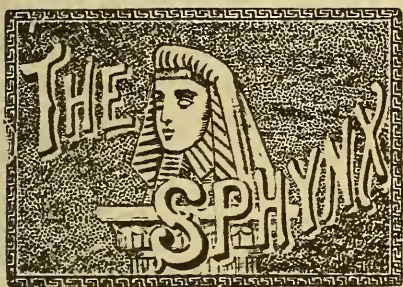
Young man to photographer: "Are my pictures done?"

Artist: "Let's see (carefully scanning the young man's face, and then the photographs he holds in his hand); what's the name?"

Young man (in astonishment): "Jones, sir."

Artist (having discovered the names on them): "Oh, yes; these are yours."

THE Chicago Convention opens August 23d. It should be kept in mind. You should be there. You should become a member, and thus secure a voice and a seat in it now.



SPHYNX presents a fine batch of queries below, and does hope that some conscientious photographer, and many others, will send answers.

This column could be made a most useful one to all. Won't you try? It is intended as our chatter-box—our convention on a small scale, or even our symposium, since such are the fashion. Help us. We want you to run it.

Queries.

I SHOULD like to say a word to that mysterious body, "Sphynx." Can you tell me whether the change that takes place in nitric acid, by exposure to light and atmosphere (such as would occur by using it from a glass-stoppered bottle), renders it unfit for use in the negative bath? I have a one-pound bottle, which I have used for eight or nine months, on the shelf in my dark-room, and only exposed to light when we had occasion to use it outside (not very often), and when the dark-room door was open; but added to a new, sunned, and perfectly clear bath, it does not seem to have the least effect on fog. Once more, has there been a formula published for "Water Varnish"? If so, where? If not, can't some one give one?

E. B. CORE.

WHAT kind of iodizing agent in the silver bath will give the finest detail? Some photographers use iodide ammonium, others iodide potassium.

Will fusing a silver bath burn out the iodizing?

Is it a good plan to add the iodizing when the silver is at fusing heat?

Are prints more permanent from using acid silver, rather than alkaline?

Will some one tell us how to get the waste silver out of a pyrogallie redeveloper?

1. WILL some one who thoroughly understands printing and toning please give a formula for obtaining rich purple-brown tones like the embellishment in Hearn's *Practical Printer*?

2. Can some one explain why certain brands of albumen paper render a printing bath acid after a few sheets (say, six or eight) have been floated upon it, the bath being alkaline at the commencement?

3. Why does a batch of prints sometimes retain the same color in the hypo-bath to which they were toned, and at other times assume a dirty-brown tint, the silvering, toning, and fixing baths remaining the same at all times? An answer to the above will greatly oblige
DELTA.

WHY does the printing bath turn red or discolor? How should it be treated to keep it clear after once red? I have put permanganate of potash and kaolin in, which only clears it for awhile.
FLIPPO.

CALIFORNIA CORRESPONDENCE.

TIMES here in California are not what they ought to be; but, after all, it is the photographers' own fault, for, instead of making one united stand, they are working against each other with all their might, by reducing prices to starvation rates.

We get seven dollars a dozen for our cabinets, which you know is little enough for the work we turn out; but when we do ask such figures, we are generally answered by the customer that such is too much; that Mr. So and So and Mr. So and So do them for nearly half. When we reply that we do think seven dollars little enough, and that we cannot see how Mr. So and So can do the same work for three or four dollars, when his regular charges are (or are supposed to be) seven dollars per dozen, the customer will say that it does not matter to them if the photographer Mr. So and So can do it for three or four dollars or not, and make profit by it, so long as THEY can get it done there for THAT price, and the customer will leave our rooms to go to Mr. So and So. Now what is the consequence? We lose that customer. Why? Because we expect fair prices for good work, and Mr. So and So gets the customer for three or four dollars a

dozen, as the case may be, and what profit he makes out of them you can judge for yourself.

The reduction in price is not the only bad feature about this reduction business; it is the trouble these people give you. The mere fact that a reduction has been granted them, makes them feel that the photographer will make up somehow or other on their pictures; they are more particular, require more attention, want more resittings, and even a larger "baker's dozen," than the party who pays full price.

Here in our city we have two galleries which both lay claim to be the leading photographers, and both, instead of upholding the price and elevating the art, are the very ones that are constantly making reductions; it is quantity more than quality with them. Now I reason that any firm that begins this reduction business shows signs of weakness, a weakness which ultimately must result in decay.

I, for my part, had rather make only seven or eight sittings a day and get full rates for them, than make one or two dozen sittings and get only little pay for it; and rest assured, although I may not do such a "tremendous" business as others, at the end of the month my ledger will show up better.

I might keep on in this strain, but I suppose you know enough of this matter without having me add my mite. I merely wanted to show you why business here was not as good as was expected.

Still, to use poor Rulofson's motto, "*Sperro Meliora.*" Yours fraternally,

GEORGE B. RIEMAN,
Of Rieman & Tuttle.

A FIRM in Europe has introduced a tent specially adapted for developing dry plates in the field. Some people imagine that one special advantage to be found in the use of dry plates, consists in there being no necessity to develop them till one gets home again, after his photographic outing. A tent for such a purpose suggests the query, "Why not go in for the wet process altogether, if one has to carry such a cumbersome adjunct to the outfit?"

AN ESSAY ON THE EDUCATION OF THE EYE

WITH REFERENCE TO PAINTING.

BY JOHN BURNET, F.R.S.

(Continued from page 173.)

ARRANGEMENT—*Continued.*

THIS regularity of diminution and perspective effect has been noticed principally in the arrangement of the heads; it is also to be observed in the base lines of the several compositions of the figures, such as we observe upon this side of the Heliodorus, where the Pope enters, marking the line from the foreground to the distance, assisting the perspective by such means as to lead the eye into the depths of the composition, while it gives the appearance of truth and simplicity of natural diminution. See Fig. 43. I have given an additional plate (Fig. 44), part of the Dispute of the Sacrament, where this disposition is more evident. Independent of this mode of arrangement being of use in giving uniformity to irregular portions of a composition, it is of great advantage in directing the eye to the principal parts of the picture by means of the perspective appearance of the line; also by producing such arrangement either by the base of the group or the introduction of accidental objects to assist such deceptive diminution, we counteract the effects of false perspective, which the base line of the group sometimes produces; for in conducting the design, the heads and upper portions only of the composition are attended to in the first instance, without reflecting how the parts which come in contact with the ground will appear when terminated according to their true position in the picture.

A knowledge of arrangement enables us yet further to heighten the gratification of the spectator, by engrafting upon the work those forms found in the compositions of the most celebrated artists. This knowledge it is which enables the poet to give so pleasing and vivid descriptions of scenery, often gratifying the imagination more than an actual survey of the scene he describes; as Addison remarks, "He takes indeed the landscape after her, but gives it more vigorous touches, heightens its beauty, and enlivens the whole piece, that the images

which flow from the objects themselves appear weak and faint, in comparison of those | follow up and extend lines and forms often only hinted at in nature; those parts which



CHURCH & WALKER, PHILA.

that come from the expressions." A knowledge of arrangement enables the artist to | possess a strong local character, he preserved as leading points to an harmonious assem-

blage of lines; while portions possessing beauty he enshrines in masses of repose, or surrounds them with forms and colors which add to their effect upon the spectator. Even in the wild, rugged scenes of savage grandeur, where rocks, trees, and clouds combine in awful magnificence, a knowledge of arrangement is necessary to preserve this earthquake-like appearance. In the works of Salvator Rosa, the student will find many examples of this mode of arrangement, every part of the work uniting "in dreadful harmony." To acquire a knowledge of beautiful scenery, founded upon aerial perspective, or an agreeable assemblage of lines and forms, he ought to study the arrangements of Claude, Cuyp, and those of Turner, whose works are filled with the various qualities which constitute the true poetry of painting, and the power of giving extent and magnificence in the highest degree.

(To be continued.)

OLD THINGS IN NEW DRESS.

BY THE LATE JOHN L. GIBON.

(Continued from page 22.)

Printing Formula.—"Almost any kind of paper can be successfully worked with the following formula :

Sensitizing Solution.

Nitrate of Silver, . . . 2560 grains.
Water, 16 ounces.

"Dissolve; convert four fluid ounces of the solution into ammonia nitrate; mix again with the other, and very nearly neutralize the whole; then add water sufficient to make sixty-four ounces.

Toning Bath.

Chloride of Gold, . . . 12 grains.
Common Table Salt, . . . 2 drachms.
Water, 1 gallon.

"Neutralize with bicarbonate of soda."

Method for Preventing Blisters.—

"Alum, 1 ounce.
Water, 40 ounces.

"Dissolve, and soak the prints in it for eight or ten minutes, after toning and before fixing. It may be used repeatedly. The tone and gloss of the paper are also improved.

"Should the paper show a tendency to crack, after drying and mounting, use a weaker solution, or remove the prints sooner from it."

To Prepare an Old Negative Bath for Silvering Paper.—"This is an old rule, but to some young photographers it will be new; and since economy of time and materials is the order of the day, we give it, hoping it may prove useful, especially to those in the rural districts, who cannot easily send their old baths to a reclaimer of wastes.

"If the old negative bath is acid, neutralize with either carbonate of soda or liquor ammonia (a slight excess of alkali does not matter), and set in the sun for an hour or so. If there is no sun, keep it in the light as long as you can. The object of this is to precipitate all organic matter and other impurities, while retaining the alcohol in the solution. When sufficiently sunned, add one drachm of a solution of citric acid (sixteen grains to the ounce of water) to every eight ounces of bath solution. This will precipitate the iodide of silver in the bath. Filter, and add fresh silver until the solution contains thirty-five grains to the ounce.

"To every half gallon, add half an ounce of muriatic acid; shake well; then add enough liquor ammonia to make it slightly alkaline; again shake well; filter, and save the filtering paper for similar subsequent use as long as you can. Every time you strengthen, add a little acid and ammonia as described. Float the paper from thirty to forty seconds, no more. Fume as usual, and the prints will be all that can be desired.

"Give this a trial; it is not much trouble to prepare it, and the result is well worth the time."

How to Prepare Canvas for Solar Printing.—"Get a piece of prepared canvas, such as painters generally use; rub the little knots of paint down with fine emery and alcohol; then rub with alcohol until the paint is almost off. The rubbing must be done in circles, commencing in the centre of the canvas. Care must be taken not to rub *too much*, thereby showing the bare canvas. After rubbing, wash the canvas well with water.

"Mix kaolin with alcohol, to a paste;

lay a good, even coating of the mixture on the canvas, and let it dry hard, so that when the stretcher is shaken, the kaolin falls off in scales; now wash well with water, and salt with any of the usual salting solutions. After the picture is printed, toned, and fixed, give the canvas a coat of *megilp*. It is now ready for the painter.

"Some use gelatin for the last coating; but *megilp* takes the paint much better, and is in no danger of peeling off."

Distilled Water.—Every photographer who spends his summers amid the mountains and wild country places, making negatives for the coming winter, knows how difficult this necessary article is to obtain, and, when obtained, how apt to be impure. As a substitute, take the purest river or spring water you can procure, and boil it. Now add to every ounce a quarter grain of nitrate of silver; allow it to stand; when cold, filter. This will meet every requirement."

On Warming the Developer.—"All photographers know the difficulty of obtaining sufficient time on children's pictures, yet but very few practice a simple and effective remedy. It is simply this: *Heat the developer.* An old quarter size metal plate, with the edges turned up, will hold about enough for one negative. Heat it over the gas. It works like magic. True, it will lack softness and depth; but what can you expect when the child *will not sit still.*"

Alcohol in Collodion.—"A preponderance of alcohol increases the sensibility and keeping qualities of the collodion; but the alcohol should be very free from water, or its presence will prove injurious instead of beneficial."

Cheap Siphon for Silver Bath.—"Take four feet of heavy rubber tubing, with bore about a quarter of an inch; cut off one foot of the tubing, and join again with a piece of glass tubing, leaving about two inches of the glass exposed between the rubber tubings. Insert another glass tube in the free end of the *short* piece of rubber. The whole thing will not cost above seventy-five cents. In using, drop the longest end of the rubber pipe into your bath. Have

your bottle, into which you wish to empty it, placed close by. Now, with the lips on the glass on the end of the short tube, draw the bath up until you see it in the glass between the two pieces of rubber; then grasp the rubber tubing firmly between the thumb and forefinger, and hold it so while you draw out the glass mouth-piece and lower the tube into your bottle. The solution will at once begin to flow, and if the tubing is properly arranged, the bath will empty itself clean out, without further attention."

HOW GOOD PHOTOGRAPHERS WORK.

BY THEMSELVES.

(Continued from page 193.)

In order to make the responses to our questions more easily understood, we repeat the list of our

QUERIES.

1. How do you supply yourself with distilled water for your bath?
2. How do you keep your solutions cool in hot weather and of equal temperature?
3. What is the best formulæ in your hands for bath, collodion, and developer, which work in harmony?
4. How do you keep your paper from turning yellow in hot weather?
5. What is the best way to wash prints where the water supply is small?
6. What is your method of lighting the subject ordinarily?

In answering, use drawings if you wish.

This is an open letter to *all* of our readers, and we shall be glad to have their views in such measure upon these subjects as they have the time to give for the good of the craft.

THE RESPONSES.

FROM THOS. H. JOHNSON, HOMEWOOD, ILL.

I WILL now try and answer your questions.

1. I use ice water for all purposes where distilled water is recommended. In making a new bath I use fused silver, 40 grains strong; dissolve and sun until it all settles clear; then filter, acidify, and then iodize by leaving a good large collodionized plate in over night.

2. The only way I keep my solutions of an equal temperature is by ventilating my dark-room as well as I can, and when it gets very warm I use a little more alcohol in the collodion.

3. I prefer for collodion :

Iodide of Cadmium, . . .	4 grains.
Iodide of Potassium, . . .	2 "
Bromide of Cadmium, . . .	2½ "
Cotton, . . .	4½ "
Alcohol and Ether, . . .	equal parts.
Bath (slightly acid), . . .	40 grains.

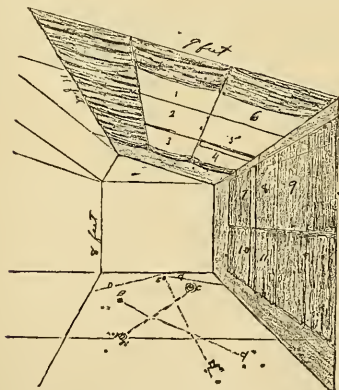
Developer.

Sulphate of Iron, . . .	1 ounce.
Water, . . .	16 ounces.
Acetic Acid, No. 8, . . .	1 to 3 ozs.

As to commercial collodion, I never had much luck with it.

4. I keep my paper from turning yellow simply by drying well by heat before fuming, for the reason that the paper absorbs moisture in warm weather, or at least retains it unless dried by heat. I have no trouble, and work almost in an oven, my room is so warm.

5. My mode of washing prints is by picking them over one at a time through several changes of water, then let stand several hours, then through several changes more, then mount. I would rather have pictures washed in this way than those that have been washed in sinks for days. One thing I should like to remark is, that prints that are toned past the reddish-brown are by far the most permanent.



The above drawing is about the proportion of my operating-room, and by referring

to it you will better understand my mode of lighting. I prefer the position of B to either of the others for portraits; for this position I close all the curtains with the exception of 1, 2, 5, and 6, sometimes leaving a small space between 8 and 9.

Position c, only use small space between 4, 5, 7, 8, 10, and 11, using screen on shadow side, or rather to light up shadow.

Position for standing figures and children generally place about as position E.

Position E, for bust portraits, open curtains 1, 2, 4, and 5. A little space between 7 and 8. I use a screen to light up the shadows, as little as I can.

It is hard to describe how to light the siter, even ordinarily, as it is greatly owing to the quality of light and the subject. The mode I have described is with the supposition that you have a fair subject to deal with. Take, for instance, the people that you generally get in the country. With them you scarcely can get too much light, as their faces are mostly pretty red. I will inclose you a few prints* taken in the different positions I have mentioned. My mode of working and formulæ have been well tried and not found wanting.

FROM WM. MCCOMB, MUSKEGON, MICH.

In reply to your six questions I will answer :

1. I supply myself with pure water by putting one gallon of soft water in a large bottle, and add three ounces of kaolin and one-quarter of an ounce of nitrate of silver; place in the sun until perfectly clear, which will take several days. I mark the above "Purified Water."

2. I simply place ice in a large vessel and place it underneath the bath, etc. The air from the ice will keep the bath, etc., of a right temperature.

3. The bath I use I think I copied from your valuable journal several months ago, which I find to work well. It is as follows:

Nitrate Silver, . . .	8 ounces.
Water (purified), . . .	96 "

When dissolved, add just sufficient bicar-

* The studies sent by our obliging correspondent are very finely lighted and splendidly modelled, requiring little, if any, retouching.

bonate of soda, so as to cause a slight precipitate, which will require only a few grains. Iodize by pouring in one-half ounce of collodion; now put in the sun for half a day, filter through cotton batting, now add enough nitric acid C. P., to make it work clear.

My collodion is made as follows:

Iodide of Ammonium, .	40 grains.
Iodide of Cadmium, .	40 "
Bromide of Cadmium, .	20 "
Bromide of Potassium, .	20 "
Alcohol (Atwood's), .	8 ounces.
Ether,	8 "
Gun-Cotton,	80 grains.

The following for developer I have used for several months. I find it to work splendidly with the above collodion and silver bath:

Iron and Ammonia, . .	4½ oz., 2 dr., 1 scr.
Sulphate of Copper, . .	38 scruples.
Glacial Acetic Acid, . .	3 oz. and 2½ dr.
Liq. Ammonia (conc.), .	1 drachm.
Alcohol,	2¾ ounces.
Water,	64 "

Filter.

4. I do not have any trouble with my paper turning yellow. I mix my nitrate of silver and purified water until it equals 60 grains strong, then I neutralize it with liquid ammonia, concentrated. I do not fume; the silvered paper prints like fumed paper. I prefer the following toning-bath to any that I have yet used. The receipt was published several years ago in the *Year Book*, by Charles Durand. I make my lime-water by buying ten cents' worth of lime (unslacked), which will make about 3 or 4 gallons of lime-water. The lime-water can be purchased at the druggist's.

Toning-Bath.

Chloride of Gold (pure), .	15 grains.
Lime-Water,	15 ounces.
Acetate of Soda,	3 drachms.

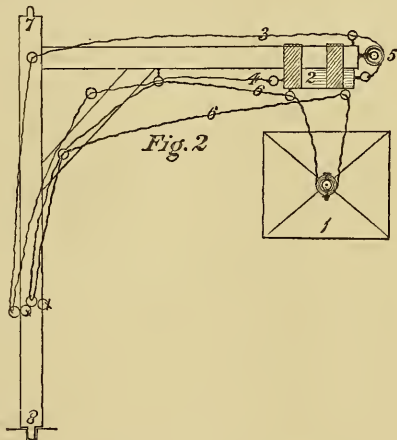
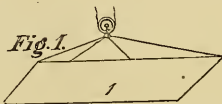
Keep in a stoppered bottle. Do not use before four or five days after mixing the above. When required for use, one ounce of the above should be added to four ounces of water, and it can be used at once. You can get a beautiful tone by washing the prints *once*, and then place them in the toning-bath, and when toned the used bath

should be poured into a bottle and placed aside for future use, and strengthened from the stock solution, when it is necessary, to the same proportions as at first, viz.: one ounce of the gold solution and four ounces water.

5. I cannot say, as I always had a good supply of water.

6. My sky- and side-light is facing north-east. The glass is ground; when the light is very bright, I cover the half of the sky-light that is directly over the sitter, and sometimes the whole of this side-light, with white cotton curtains on rollers.

I have a head-screen, and I send a rough sketch of it.



No. 1. Is screen on frame.

No. 2. Is a small board attached to the frame, which is drawn backward and forward by means of cord Nos. 3 and 4.

No. 5. Pulley at end of frame.

No. 6. Cord to lower or raise screen.

The frame is set in the side-light; the top notch, No. 7, is placed in a large screw-eye; the bottom notch, No. 8, is placed in a hole large enough to let it run easily. The sitter can sit any place under the skylight, and you can move the frame with the screen so that it will be over the sitter.

FROM D. FILSON & SON, STEUBENVILLE, O.

1. Formerly we used condensed steam from pipes used in heating buildings, when

not contaminated with iron; but for the last few years we have used Ohio River water, which we find sufficiently soft and pure for all purposes.

2. We have no weather troubles. Our dark-room is so located that it has no communication with the outside world at all. It is a room within a room, getting light from the operating-room. We keep a barrel full of fresh water for washing negatives and other uses.

The supply of water comes from the city water-works, and we have almost a continuous flow through our dark-room, which assists very much in equalizing the temperature.

3. We have made but few baths. We made up a new bath in 1865, according to Burgess; worked it until 1878, when we made another after same formula, and mixed them; we are now making negatives of children from this bath in two to five seconds in favorable light. Of course the bath has been kept up through all these years by strengthening when necessary. We never evaporated and fused or crystallized either of these baths; never had any occasion to do so. But we boiled them frequently to remove ether and alcohol. In boiling the bath we double the volume by adding water, and boil down to the original quantity. We think that the negative bath is often charged with faults of which it is not guilty. The real cause of trouble is very likely in the collodion. We have had very little trouble with the negative bath. We "doctor" it very little. You know it is said that "doctors" kill more than they cure. We believe this so far as photographic "doctors" are concerned. The bath will not get very sick, if you keep it clean and give it the proper doses of nitrate of silver, which will give it strength to dispose of accumulating iodide of silver. As to collodion, we have not made any for several years. We find that there is just as good collodion in the market as can be made, and as cheap as we could make it. We use Lewis & Holt's, Anthony's, Anthony's New, E. Draper's, and "Sunbeam." You may ask why do you use so many different collodions? That is the secret of nearly all bath troubles, as we believe. We have found that in using one

kind of collodion in a bath for several months, it will not harmonize any longer. Right here, now, is where the bath doctor commences; please just dismiss him before he administers a single dose. Our remedy is, see that the bath is clean and of proper strength. Take another collodion; if that don't work, try another, and so on. We sometimes mix; sometimes change the color of the collodion. We never have failed to find relief in this way. We cannot speak too highly of the "Sunbeam" collodion, made by Mr. J. H. Rink, stock-dealer of Wheeling, West Va.; it is the quickest we ever worked. Mr. E. Draper's, from Wilson, Hood & Co., Philadelphia, is very fine, and works well in our hands. Lewis & Holt's, and Anthony's, have been so long in the market, that their qualities are well known. We work a forty-five grain bath, neutral, inclining to acid.

Developer.

Double Sulph. of Iron and Ammonia,	1 ounce.
Water,	16 ounces.
Acetic Acid, No. 8,	2 "
Alcohol,	$\frac{1}{2}$ ounce.

4. We float in the morning; dry by fanning instead of heat, fume, print; and tone the same day; keep in cool, dark place; sometimes use chloride of lime in damp weather.

5. This is a question we have never given any thought, always having plenty of water ourselves; but would think that treating the prints to a weak solution of salt after fixing, say one tablespoonful of salt to three quarts of water, leaving them in this solution about ten minutes; then wash with frequent changes, keeping the prints in motion as much as possible, would be the course that we would pursue.

6. This question takes a very wide range, and to describe the lighting of the various subjects, we do not feel at liberty to direct, from the fact that skylights vary so much in location, construction, and angle, which produce different effects, so that the description of one would be of no benefit to another; we question whether two operators would work the same light in the same manner.

But we will give you an incident that happened in our gallery a few days since.

A photographer from the rural district came in, and we having just at the time a rather hard subject in the chair, he having light-gray projecting eyes, the rural man came up and whispered, "You are not going to try that fellow for a photograph, are you?" We told him we were. He said he never could take eyes of that kind. The operator told him to stand behind the camera, and watch the subject's face; he then moved the curtain, and cut off all the front light and most of the side light, and gave him sky-light effect entirely; we exposed a plate and a good negative was the result. After the customer retired, our visitor said that he learned more from that sitting about lighting than he ever knew before. The bad lighting of subjects in many cases is, we think, the result of carelessness, want of thought and study. Every operator should make his light a daily study.

FROM L. G. BIGELOW, JACKSON, MICH.

1. I use rain-water or melted ice. Place a few grains of silver in a large, clear, glass bottle, and sun until clear. It is then, after filtering, always ready for a bath.

2. In a galvanized-iron bath-box, filled with water, introducing when required a few small pieces of ice.

3. "Formula for bath, collodion, and developer:"

Bath, 40 grains, thoroughly iodized.

Developer, plain iron, 20 grains, with acid and alcohol, as required; acetic acid about 1 ounce to 8 ounces solution.

Collodion.

Alcohol,	1 ounce.
Ether,	1 "
Iodide of Ammonium, . .	3½ grains.
Iodide of Lithium, . .	1½ "
Bromide of Potassium, .	2 "
Cotton,	5 to 7 grs.

Paper bath, 50 grains strong, ammonia nitrate. In hot weather, float the paper on its back on a solution of citric acid, 2 grains; water, 1 ounce; dry, and float on the silver bath in the usual way.

4. When the water supply is small, use a Moulton print-washer.

5. Lighting the sitter.—With the light I

am using now (which is a single light, 12 x 12 feet, of ground-glass; pitch about 45°; lowest point, 5½ feet), I place my sitter about four feet in front of the back side of the light for ordinary light, and for Rembrandt effects about the centre of the light, working the camera more toward the light. I usually work the light entirely open. I use a cream-colored side-screen as a shadow softener or reflector. Of course, I use the Bigelow background for all bust work.

FROM M. L. DAGGETT, TAUNTON, MASS.

WHILE willing to assist any who are "less informed" than I am (as your request reads), I feel as though I needed to "sit at the feet" of the "Gamaliels" of the trade, and learn myself.

1. How do you supply yourself with distilled water for your bath?

I never use it! Theorists say the purest water works best for bath purposes, but my own practice has proved to *my* satisfaction (though it may not satisfy others) that it is entirely unnecessary to use distilled water. I do not even use so-called "sunned water," but have, in times past, made baths out of river water that was so black with dye-stuffs and the ordinary dirt found in river water, that it was impossible to see the bottom of a quart pitcher when filled with it, and I think my negatives will bear good testimony as to the quality of the bath when made.

So far as my experience goes, far greater care is necessary to have pure water for washing the prints than making the baths; that is practice *versus* theory.

2. How do you keep your solutions cool in hot weather and of equal temperature?

Having but slight occasion to protect myself from troubles arising from that source, I have never taken any special pains to equalize the temperature of my dark-room and chemicals; steam heat through the winter enables me to keep summer temperature at my pleasure, and I prefer to let those handle that subject whose necessities have led them to experiment in that direction. I will say this much, however, that while most photographers keep their bath-holders in a wooden box, as protection from

light, *many* whom I have seen do not, but wrap some opaque covering around the glass, and many more who use a box do not have a tight cover, but a loose board or a cloth over the top. This method, while *always* open to the objection of dirt, *may* be a source of inequality of temperature not felt by those who keep a comparatively undisturbed air space all around their bath-dishes. My own plan is as follows: A glass bath, whose bulk is 612 cubic inches, rests in a holder of 1188 cubic inches capacity, touching it only at two points (with the exception of the bottom), thus allowing a still air space of 576 cubic inches around it, which, while it may not give immunity from trouble, is of great assistance.

3. What is the best formulæ in your hands for bath, collodion and developer which work in harmony?

Of course, that cat's tail when unfolded shows it to be the biggest feline in the bag, and "no fellah knows" how long it is, for when you think you have run against the end, a careful examination shows the fur all turned the wrong way and you have only come to a twist in it, and doctors disagree so wofully that the anatomy of the subject may be said to be unknown. A man who means every-day work must be content for the greater part of the time to follow where the fur is smooth, and leave the kinks for amateurs and doctors. My bath is made (as in answer to query No. 1) of just the water that runs from the faucet, if it is soft water. If yours is not, go to the nearest rain-water hogshead and help yourself. Put in the silver till about forty grains to the ounce. Make your iodide of silver in the usual way, and put in *a lot of it*. Do not be afraid of getting in too much. I have yet to see the bath with too much, for I have run the same baths for about five years without taking out any iodide, and do not intend to for the next five, so far as I can judge from the way they work now. I mean, by the above, that I never dilute and filter out the precipitate as usually recommended, but I will admit that I take out some, as follows: when a bath that has never had the iodide filtered out is fused, there is, after the subsidence of the foamy stage, a time when you would judge

by appearances you were boiling milk, so perfectly white does the bath turn; when fused, cooled (granulate your bath by stirring as it cools), and redissolved in *just the quantity* of water to bring it to the *right strength*, there is an abundant precipitate of iodide that the water *will not take up* in twelve hours; how much it may take up in time I know not, as I have never left it longer than over night, filtering out what was undissolved the next morning.

In regard to the dreaded "pinholes," I always look elsewhere than for iodide, *dirt* making most of them. As to the acidity of the bath, you have my experience in a nutshell on page 110 of *Mosaics*, 1880, by A. W. Kimball. I often work an alkaline bath; all is, *oblige* your bath and collodion to harmonize as to acidity, and fog streaks, etc., vanish. You have then only to choose your make of collodion to regulate intensity and rapidity.

In collodions, the rule is the more rapid the sample you use works the quicker it degenerates. The old stand-by for collodion formula, viz.,

Iodide of Ammonium,	. 3 ounces.
Iodide of Cadmium, .	. 2 "
Bromide of Cadmium, .	. 2½ "
Cotton, . . . .	. 3½ to 4 ozs.

Makes a good, soft, quick-working sample as one could wish, and if properly timed and developed needs no intensification.

A good developer, which works well in bringing out all the detail, especially in the high-lights, *i.e.*, one which will not run the high-lights into one mass of dead white, but will "go slow" and bring out every half-tone, is made as follows:

Plain Iron, . . . .	. 6 ounces.
Sulphate of Copper, .	. 1 ounce.
Water, . . . . .	. 80 ounces.

To this add acid as follows: 1 ounce to 16, but only as you wish to use it.

It will keep for months, clear and clean, and give clean work.

(To be continued.)

OUR AUGUST ISSUE will probably reach you a few days behind time, in order to carry the latest news concerning the Chicago Convention. Don't stay home for it.

ABOUT THE



THE Photographers' Association of America is making earnest preparations for the Convention in Chicago, to open on August 23d. We hear nothing but good news concerning it, as you will learn from the letters which follow, from the President and Secretary.

We hope all who can will go—not to see Chicago, not to gossip and to find fault, but with the full determination to give out and take in all the photographic information you can. We look upon the success of this enterprise as very important to the photographers of America. No matter how selfishly you look upon it, good is bound to come of it—and *much* good, if it is entered into as heartily as our friends in Chicago are already engaged in the work of preparation. *Strength*, and substantial assurance that their efforts are sanctioned and approved, is what these gentlemen now want. *Become a member.* There is “no money in it” for anybody. The fees are low—the expenses will be kept down—an honest effort will be made to elevate and improve us all. Join hands with it, and you will profit by it. We hope to see you all there, and wish we could be lifted up on one of Singhi's magic pedestals, and had the voice to harangue you until you all consented to go. We hope to secure all the news for those who *must* stay at home, and to preserve it for those who go.

A WORD FROM PRESIDENT RYDER.

“EDITOR PHILADELPHIA PHOTOGRAPHER.

“DEAR SIR: Will you kindly allow me to say, through the pages of the *Photographer*, what may be considered replies to many who have addressed inquiries to me, and what may be, in a general way, information to all interested in the coming convention at Chicago, commencing August 23d?

“To those asking what we are going to do, what we hope to effect, etc., I say we will meet *and be friendly*. For a few days, we will turn our backs upon our galleries, and start out for a good time; we will renew acquaintance with many we met years ago at the N. P. A. gatherings, and be sociable; we will make actual acquaintance with men we have known for years, through others, and, in finding out what good fellows they are, will show them what they have lost in not knowing us before. From the genuine sociability that shall prevail, free interchange of ideas will follow, and small jealousies be dropped. In our exhibition hall will be seen the best efforts in photographic work from all parts of the country. There we may compare our own with the work of others, and take hints. We may make private resolutions for improvement, and go home filled with new ambition.

“We hope, beyond this, to determine upon some general points in business management that shall be advantageous to all. The respectability and practical advancement of our honorable calling is what all good men desire, and we call upon all such to attend the convention.

“To this time, indications are favorable to a large attendance.

“Yours truly,

“J. F. RYDER.

“CLEVELAND, O., June 24th, 1880.”

A LETTER FROM THE SECRETARY.

“It is less than two months to the date fixed for the First Convention and Exhibition of our new Society, and from the very large number of congratulatory letters and applications for membership and space for exhibition we have already received, we have every prospect and assurance that it will be a grand success.

“The Exhibition will be held in Hersey Music Hall, a fine large hall, with windows on both north and south sides. The meetings will be held in the new Fairbank Hall, in the new Music Hall block.

“As the time will so soon be here, begin *now* to prepare your specimens, and make up your mind to come with them, and by comparing them with each other, and exchanging ideas, you will receive such benefit

that you will have no cause to regret the time and expense it will require.

"The Chicago photographers are preparing to give you all a royal welcome and entertainment, and the good time you will have here will make you go home cheered, strengthened, and invigorated, and in every way better prepared, both by the vacation you will take and the knowledge you will acquire, to improve the standard of your work, and also to get better prices for it.

"No city in the world is so well prepared with hotel accommodations as Chicago, and at prices to suit every pocket.

"Among the attractions will be an Art Lecture, illustrated with lantern projections, by T. J. Mapes, Esq.; a lecture on 'Photographic Chemistry,' by Dr. Walter S. Haines, and a lecture on 'Sanitary Hints,' by Dr. Norman Briggs. The last two are professors in Rush Medical College, and all the lectures will be very superior and helpful.

"Photographers who are also Knight Templars, can arrange to attend both conventions, as our meeting commences the Monday following theirs.

"Join now; two dollars will make a photographer a member, and one dollar will do the same for an employee.

"I will be pleased to answer any inquiries in regard to the Association, the Convention, or Exhibition.

"A. J. W. COPELIN,

"75 MADISON ST., CHICAGO.

Secretary."

SOCIETY GOSSIP.

THE BOSTON PHOTOGRAPHIC ASSOCIATION.—Regular meeting held at the studio of J. W. Black, June 2d, 1880.

The meeting was called to order by the President, Mr. C. F. Richardson, there being about twenty members present.

Mr. T. H. Blair, the inventor of the tourograph (a dry-plate camera), was introduced to the meeting, and explained the working of his new view camera, which is very simple and ingenious. The box, when closed for carrying, is about 8 x 10 inches, and weighs less than ten pounds. It has a plate-box, which holds twelve 5 x 8 dry plates, and can be used for single or stereo-

scopic negatives. The box was gotten up for amateur photographers, college boys, and artists, and fills the requirements completely.

A vote of thanks was given to Mr. Blair for his interesting explanation of the box.

As usual, sample photographs were brought by several members, and were examined carefully. This kind of exhibition goes far towards improving the artistic feelings of photographers, and gives them a chance to compare work and get ideas in lighting and positions.

Mr. C. F. Richardson had some prints from his quick-working dry plates, which were examined with much interest.

The meeting adjourned till the first Wednesday in October.

W. N. PARTRIDGE,

Secretary.

CHICAGO PHOTOGRAPHIC ASSOCIATION.—Regular meeting held in the College of Pharmacy, Wednesday evening, June 2d, 1880. Meeting called to order by the President, Mr. Rocher, at half-past eight o'clock. A small attendance and delay in getting to work, no doubt caused by the temporary excitement the city was laboring under on account of the Republican Convention. Minutes of the last meeting read and approved. There being no new applications for membership, the miscellaneous work of the evening was taken up.

Mr. Cross, well known to the fraternity for his many useful inventions, was present, to introduce his dry-plate process, which took up the greater part of the evening.

Mr. Cross has been using this process for some considerable time, in both gallery and field work, and, as a most complete and satisfactory test of its merits, had with him some forty or fifty specimens of what it could do.

Taken as a whole, the pictures he exhibited were of a decidedly satisfactory character, and did much to strengthen the feeling, in many minds, that the process of the future was fast getting to the point when it would become of daily use in every studio.

A number of the plates were developed, prints from them to be shown at the next meeting, and considerable discussion ensued, more particularly as to the effect upon

the eyes of the operator of the ruby light in the dark-room. No satisfactory result was arrived at, and the matter was dropped.

Mr. Cross now has his plates ready for the trade, and claims for them simply the qualities of a good, reliable article.

After the dry-plate matter had been sufficiently discussed, the Secretary called attention to the fact that nothing had as yet been done toward the bringing together, for the purpose of discussion and wholesome criticism, specimens of daily work of members; and, as it was a vital matter, he presented a motion as follows:

Resolved, That each member of this Society shall bring to the next regular meeting at least one specimen of his work, for exhibition and discussion.

Mr. Klein moved, as an amendment, that the negatives from which the prints were made be also brought.

The motion and amendment passed. Some discussion followed as to whether employees should bring work of their own; but as this was implied in the motion, it was soon disposed of by leaving to the option of each member the kind of work he should present.

The President called attention to the fact that names and applications for membership were coming in rapidly for the *Photographers' Association of America*, and encouraged the Chicago fraternity to bestir themselves, and send in their names and funds. Amount of initiation fee is, for employers, two dollars; for employees, one dollar.

On motion, adjourned.

J. E. BEEBE,
Secretary.

ASSOCIATION OF OPERATIVE PHOTOGRAPHERS OF NEW YORK.—Meeting held June 2d, 1880, at Beethoven Hall, President Charles Hendrickson in the chair.

After the regular routine business, the Secretary was instructed to confer with the photographic press of the country, and request of them particularly to inform the Association of vacancies, if known to them, provided they will consider the Association as a guarantee for any applicant they may recommend.

Mr. Charles Ehrmann propounded the

following question, to be discussed in next meeting:

"What progress has photography made, technically, within the last ten years?"

Messrs. Coffin, Bühler, and Hausrath were requested to answer.

Mr. Charles Kutscher, of Bellevue Hospital, volunteered to give to the Association his experience in the bromide-emulsion process.

CHARLES EHLMANN,
Secretary.

EXCURSION OF PHOTOGRAPHIC SOCIETY OF PHILADELPHIA.

BY JOHN C. BROWNE.

AFTER many delays, the members of this Society started upon their annual excursion on Monday, June 7th, 1880. It was at first proposed to go over the Union Canal from Reading, Penna., to Columbia, then, *via* the Susquehanna and Tidewater, to Havre-de-Grace, Maryland. However, at the last moment, this plan was changed, and a trip over the Morris Canal, from Phillipsburg, on the Delaware River, to Newark, New Jersey, was substituted, which proved, in many respects, to be the most enjoyable excursion that the Photographic Society has ever taken; and the members feel that they are greatly indebted to President Harts-horne, of the Lehigh Valley Railroad, and to Superintendent Kellogg, of the Morris Canal, for the use of boat and canal.

As the locks of this canal were too small to allow the boat formerly used by the Society to go through them, a smaller one, named the "Katie Kellogg," was taken, instead of the "Zuleika," and the party limited to ten.

On the day mentioned, the following gentlemen reported at the West Philadelphia Depot of the Pennsylvania Railroad, and started for Phillipsburg, New Jersey, at 8 A.M., *via* the Belvidere Delaware Railroad: Messrs. Bates, Barrington, Corlies, Samuel Sartain, Pancoast, Vaux, Craig, Seiler, McCollin, and Browne.

On arriving at Phillipsburg, the trim little boat "Katie" was found waiting to convey the party and supplies to their destination. Upon measuring the boat, it was reported to be about forty-five feet long

and ten feet wide, having a cabin large enough to give seats for all the party at meals; also a small kitchen and closets for china, provisions, etc.

It will ever be a mystery to the writer to know what became of the huge mass of supplies piled on the wharf, belonging to the party, consisting of barrels, boxes, bags, cameras, and tripods. But everything was put on the boat, and still we had room enough to move about.

The Morris Canal was constructed about the year 1824, and must have been considered, at that time, a bold and successful piece of engineering. In its course from the Delaware River to the Passaic it rises over a grade of almost one thousand feet, presenting the curious appearance of a canal high up on the hills instead of down in the valleys, as is usually the case in this country. The grades are accomplished by both locks and inclined planes, there being eleven planes on the western and twelve on the eastern division of the canal, each giving an average elevation of about sixty feet. Lake Hopatcong is at the highest point on the line, and distant about forty miles east of Phillipsburg. It furnishes all the water supplied to both the east and west divisions, and gives the power by which the boats are raised and lowered on the planes. During the trip, we heard it stated that to raise a boat, say, one hundred feet, it was more economical to use planes than locks.

On the first day out, many pictures were made of the planes, together with the towers and motive power connected with them.

Monday night was passed at the town of Washington. Next morning, by 6 A.M., the party were on board, and, after a comfortable breakfast, were soon moving rapidly through a pretty country, drawn by a pair of remarkably fine black mules, named "Tom" and "Baby." Stops were frequently made and numbers of dry plates exposed.

We may here be allowed to express a fear that many exposures made upon the black figures of our active mules will come to grief, and it will be quite interesting to know who the lucky photographer is that will exhibit the most successful print of these animals.

Tuesday evening, we left the canal, and entered Lake Hopatcong, being towed to the upper end by a small steam-tug, where we found the Lake View House ready to receive us.

Wednesday was spent in fishing, rowing, and photographing, with the amusement of a sail around the lake in the afternoon. Another night was spent on the shore of this lake; and on Thursday we had an early start, passed into the canal, and moved towards Newark.

Our course was now down hill, and we enjoyed the sensation of going down the planes, instead of ascending them, as we had done previously.

That night we slept at Little Falls, and next morning spent many hours in making pictures of the charming scenery around that place. About noon we arrived at Paterson, and hoped to be able to get some good pictures of the Passaic Falls; but, after a long, dusty walk, we were doomed to disappointment by finding the rocks dry, and not a drop of water passing over the falls.

It had been the intention of the party to remain in Paterson over night, but as it was still quite early in the afternoon, it was decided to hasten on to Bloomfield, a pretty town shaded with fine trees, and having an air of comfort very acceptable to tired travellers. Here a halt was made for the night.

Next morning was Saturday, and the end of the excursion. Being only a few miles from Newark, the termination of the canal ride, the day was devoted to photographing groups, quick exposures upon animals, etc.; then came the packing up of all our scattered treasures, followed by dinner, which was served under the shade of overhanging trees, close to the edge of the bank, the boat being tied up to the side of the canal, so that the leaves almost covered the cabin.

In this cosy spot a meeting was held, and resolutions of thanks given to those who had assisted in making the trip so enjoyable. The meeting then adjourned, to meet in Philadelphia, July 15th, 1880, to have a report of the excursion, and to compare results.

It may be worth mentioning that two

hundred and thirty-three dry plates were exposed by the party during the trip, about one-third being Carbutt's rapid gelatin plates, the remainder washed emulsion.

The different sizes of glass used varied from 7 x 9 (the largest) to $3\frac{1}{2} \times 3\frac{1}{2}$ (the smallest). One of the party amused himself by making a calculation of the number of square inches of sensitive glass exposed during the excursion, and found it to be 7541 square inches.

The following table will give the entire number of plates exposed by each person:

Bates,	41
Pancoast,	28
Sartain,	19
Corlies,	27
Craig,	19
Barrington,	14
McCollin,	18
Seiler,	35
Browne,	32
Total,	233

CORRECTIONS.

FRIEND WILSON: You make me say some funny things in the report of the Chicago Photographic Society, in your June number. First you say (or, rather, I say), "Add alum solution to paper silvering-bath, until the *precipitate is dissolved*." I do not know but alum will dissolve it, but I have my doubts. I never tried it.

Second, it reads: "Four ounces of distilled water, one hundred and ten grains of iodide of potassium. Add the potassium, ten grains at a time, etc."

Now, I will send you my formula, so you can correct it, and not mislead any one.

Silver Bath for Paper.

Nitrate of Silver, 4 ounces.
Water, to make it 40 grains to the ounce by hydrometer.

To this amount add ten or twelve drops of C. P. nitric acid; then add liquor ammonia until it is decidedly alkaline; test by red litmus-paper. Now add the alum solution, a little at a time, until it begins to curdle or grow flaky. At this stage, the precipitate will immediately settle to the bottom, and it is ready to filter for use. I always

want my solution alkaline. As for strength, every one must be his own judge.

Strengthening Solution for Gelatino-bromide Dry Plates.—Dissolve sixty grains bichloride of mercury in six ounces water; then add one hundred and ten grains iodide of potassium, ten grains at a time, then ninety grains of hyposulphite of soda. I use about one part of this to four parts of water.

You will see I have made a little change in this, and I think it works better. I have increased the water two ounces, and the hypo from forty grains to ninety grains.

P. B. GREENE, *Landscape Photo.*,

315 W. Jackson St., Chicago.

TO THE EDITOR:

THE offensiveness of its personalities might well have warranted us in passing with silence a letter signed "J. H. Folsom, Danbury, Conn.," which appears in last number of the *Philadelphia Photographer*; but it contains an error which we think it well should be rectified.

Confessing that he is prejudiced against the enlarging process, by consideration of a personal nature against one member of our firm, and hereby proclaiming his incapacity for honest criticism, this gentleman from the Nutmeg State errs in realizing the source of that prejudice, which he so insensibly acknowledges. It was not that the great "Dick Deadeye" (as he, with much good taste, describes him) sat in the Captain's office, but that the said "Dick" firmly declined to accede to the request of the Danbury artist to be supplied with a set of apparatus at a lower price than that charged to others of the craft. *Hinc illæ lacrymæ.*

So little did Mr. Folsom, of Danbury, Conn., see of the ramifications of the megatype process, when he visited us, that we do not attach any value even to his admission that a merit in this discovery "is the ease and rapidity with which they make the transfer;" for, with more knowledge of the megatype, he would have known that no claim to special merit is made on this score, the mode of transferring being quite familiar to every photographer possessing anything beyond a rudimentary knowledge of the art.

We cannot accept even indirect praise from one who knows so little of the subject as to confound it with something else. Rather would we point, with pride, to the favorable testimonials given by gentlemen of reputation, who are qualified to speak with knowledge, and who have not been slow in giving their opinions.

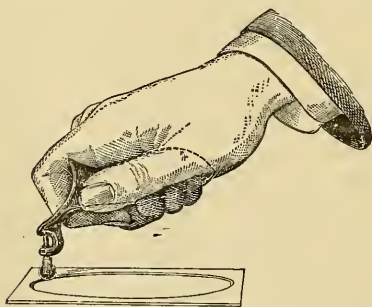
Yours truly,

THE MEGATYPE CO.,
136 Prince St., New York.

THE NEW MODEL ROBINSON'S PHOTOGRAPH TRIMMER.

IN accordance with the promise in our last issue, we now give a full description and cuts of the new model Robinson's Photograph Trimmers. The inventor, after numerous experiments, has settled upon the present form of handle for these most invaluable trimmers, deeming it far superior to the old model. An entire and radical change has been made, as our readers will remember from the cut in connection with former advertisements. At the same time, the working parts of the trimmers remain unchanged, while their ability to follow the guide is, if anything, increased by this alteration.

The drawing No. 1 shows the best mode of grasping the handle of the revolving trimmer, whereby the greatest freedom of

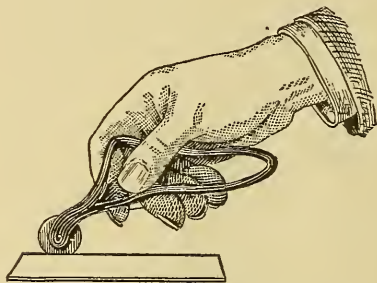


wrist-motion is obtained. Other motions, less easy, may suggest themselves to the user; but we are convinced, on the inventor's authority, and by practical experience, if the position here shown is adopted, and persevered in, it will prove the most satisfactory and the easiest in the end. The dotted

lines show the form of the handle of the trimmer as held in the hand.

Another hand might have been introduced, showing how to hold the guide; but it seemed superfluous, as any one will soon find the most convenient method of holding the guide for himself, since the hand must be frequently changed.

The rotary trimmer is a tool which will cut anything, with a proper guide, from the smallest to the largest oval, round-cornered cards of any size, and stereoscopic prints. The little wheel works freely, and its socket is firmly fastened, so that all readily follow the inside of the guide.



The "straight-cut" trimmer (shown above), so called, is for trimming any straight edges; the wheel-shank does not revolve in its socket, the wheel only turning on its own axle, and is used *outside* the guide if glass is used, or inside if one of Mr. Robinson's metal guides is used. Of these latter we would say, that they never chip or break by falling, and outlast dozens of glass ones. A little practice in the use of these trimmers will prove the many advantages they possess over the old method of the knife and scissors. They do not require incessant sharpening; it is impossible to cut the fingers with them; they are strong and durable; and, with all these facts in their favor, they have been so reduced in price as to bring them within the reach of all.

The theory of these trimmers is, that instead of *cutting* they *pinch* off the surplus paper, thereby giving a nicely-bevelled edge to the print.

The large cut accompanying the advertisement on another page, will show the actual size of the trimmers. The entire tool is now made of metal, instead of having a wooden

handle, as heretofore. These modifications and improvements, together with the increasing demand, have enabled the inventor to reduce the price from \$3.50 to \$1.00.

If, after long use, the edge of the trimming-wheel becomes dull, it can be sharpened in the following manner: In a strip of common sheet-lead, say, about six inches long, make a groove by running the trimmer in the same track three or four times; then fill the groove with fine emery, and work the trimmer back and forth—same as in cutting prints. This will make the edge as keen as when new.

We have felt constrained to devote this much space to this subject, from a desire to impress upon our readers the value of these handy little tools, and their advantage over all other methods of trimming photographs, or making any other neatly-cut edge, the many styles of guides giving an almost boundless field for the use of the Robinson Trimmer. Please refer to the advertisement.

AN IMPORTANT LAWSUIT GAINED BY A PHOTOGRAPHER.

As our readers have been informed, Mr. S. H. Parsons, of St. John's, N. F., has, for some time, been engaged in combating, single-handed and alone, the claims of the owners of the "Carbon-Chromotype Patents," in the courts. He has come out of the battle triumphant, and from a St. John's paper, which he sends us, we make the following synopsis of the case:

"Supreme Court, April Term, 1880. Lindop and Cooper vs. Simeon Parsons. Judgment by Mr. Justice Hayward. The plaintiffs in this case claim the sum of \$300, the amount of a note of hand made by defendant in their favor in the year 1877.

"It appeared upon the trial that the plaintiffs had made a contract with the defendant, who is a photographer, by which, in consideration of the sum of \$500, they agreed to give the defendant full, practical demonstration of certain processes known as 'Lambertype, Chromotype, Contretype, and Self-registering Press,' and the right to get the special materials necessary to work these processes. In this contract, also, are the following words: 'Exclusive permit is

now given to be used in the city of St. John's or any part of the Province of Newfoundland.'

"It also appeared that, under this contract, in compliance with a previous understanding, the defendant paid the plaintiffs the sum of \$200, and gave the note in question, which was payable in six months, for the balance of the consideration.

"To the plaintiffs' claim, the defendant pleaded that he was induced to make the said promissory note by the fraud and misrepresentation of the plaintiffs.

"In support of this plea, the defendant, in his evidence, alleged that before making the contract in question, the plaintiff (Cooper) called upon him at his place of business in St. John's, and requested him to purchase the process, before mentioned, which is called the carbon process, representing it to be new, and that photographers were using it in exclusion of the silver process, which was worked by defendant, and which it had superseded; that it was cheaper and more permanent and expeditious to work than the silver process, and that the plaintiffs held patents for it in Canada and the United States; also, that E. & H. T. Anthony & Co., of New York, were the only persons on this side the Atlantic from whom the materials for working the process could be obtained, and that it could only be had in New York, and from them by the authority of the plaintiffs.

"The defendant also proved that the representations were untrue, and that by them he was induced to enter into the contract and sign the note in question; that the process was not new, but was known many years ago; that it did not supersede the silver process by which he had worked, and is still working; that it was more difficult and expensive; that the plaintiffs did not hold patents for it in Canada and the United States; and in place of the material for working it being procurable only from E. & H. T. Anthony & Co., and then only by permission of the plaintiffs, it could readily be purchased from others in the United States, Canada, England, and Germany; also that the demonstration of the process only occupied two or three hours on two occasions; that he had never worked or

availed of it, except in making pictures from similar material obtained from Theodore Parsons for the purpose of this trial, and that he offered to pay the amount of the note if plaintiffs would give a guarantee that he would be protected from competition.

"The defendant's evidence as to misrepresentation is corroborated in its material points by a number of witnesses."

His Honor proceeds to say: "The last witness who gave any testimony that we think it necessary to refer to, was one of the plaintiffs, William Lindop, whose evidence was taken for the defendant, and he said that the plaintiffs had no patent for the process in Canada or the United States, but that they purchased the right to dispose of it from a person (Lambert) who had a patent in the United States, but not in Canada; he also said that there were three other persons in Toronto, and one in Montreal, who were authorized, as Anthony & Co., were, to sell the materials; he also said that a person could use the process of Lambert in Newfoundland if he had the material.

"Upon this evidence we have to decide whether the defence has been sustained, and in considering that question we must regard as sufficiently proven all the representations that the defendant alleges were made by Cooper as an inducement to him to enter into the contract, because, in the main, his evidence in that particular is sustained by other witnesses, and also because Cooper, who was a party to the transaction, and might have been examined, did not come forward to deny its truthfulness.

"If we had to judge of the case from the face of the contract, we should have no hesitation in adjudging to the plaintiffs the whole amount claimed; as, the consideration mentioned in it to be given to the defendant for the amount agreed to be paid by him, was only the imparting to him practical demonstration of certain processes which he admits he received, and an 'exclusive permit' or right to get what is termed the 'special materials' necessary for the work, which means that the plaintiffs will not give a similar right to any one else in this country; and his contention that he had bought a useless article, or one of less value than rep-

resented for a large amount of money, or that he could have obtained the same information from photographic journals and such like, would not avail him as a defence in this action. Although, however, he could not in law give any evidence to alter or vary the contract, he had a right to show the circumstances under which it was made, and to impeach its validity; and he contends that he has supported his defence in this particular, and shown that the plaintiffs so misrepresented the facts, with regard to the means of procuring the material, as to deceive him into purchasing a process which, under the circumstances represented, he might work with advantage and with but little fear of competition; whilst, according to the facts as afterwards ascertained, it would be in the power of any rival photographer more readily to acquire and adopt the same process, and by competition render it valueless to him.

"The uncontradicted evidence in the case having satisfied us that the representation was made to the defendant that the necessary materials for working the process could only, on this side of the Atlantic, be obtained in New York, and from Anthony & Co., we consider the defendant's contention reasonable, that if such were the fact he might work the process without much fear of competition, but the truth being, as disclosed in the evidence of Lindop, that this same material could be procured also in Toronto, from three different parties, and in Montreal, from another party, and as proven by the witness, William A. Lyons, of Toronto, that he purchased a quantity of the same material, parts of which he had sold, and that he had a quantity on hand for disposal to any one who chose to purchase, and also obtained the same material from Anthony & Co., without any permit or restriction. We agree also with his contention that, under these circumstances, other persons have the means more readily afforded them of acquiring and adopting the process in this country, and thereby injuring him in his trade, or rendering it valueless by their competition; and being of opinion that when Cooper induced the defendant to enter into the contract he knew the facts before deposed to, but made a wilful misrepresen-

tation, and such we think as supports the defendant's plea, we give judgment for him accordingly."

Mr. Parsons says, that "of the six days occupied by the court in my case, I was two in the witness-box. Moreover, the matter was thoroughly sifted, and this case can be relied upon for reference by any other of the fraternity who are situated as I was. I left no stone unturned to defeat those people, and spent money freely to attain my object. The honor and glory of defeating those men for the first time, has largely repaid me. Telegrams to and from New York flew thick and fast, and I think this is only a beginning of their troubles.

"Many photographers here have been crippled by just such treatment as I had. I suppose our friend Gentile will be satisfied now as to how I did 'not' pay that amount.

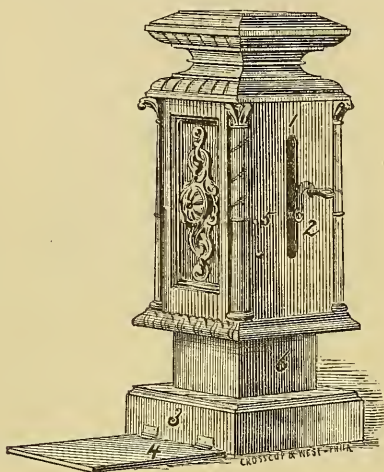
"With regard to this last remark, I may add that we did raise brains enough to produce *good* carbon pictures at our very first attempt, without any hitches or failures, made from material procured outside the vaunted control of Lindop & Cooper or E. & H. T. Anthony & Co., either. Those pictures were produced in court, to prove that we could procure material outside them, and were pronounced equal, if not better in many respects, to those sent down by them to support their claims; and they sent down a great many, but they *should have sent some one to swear they were carbon pictures*; they made a mistake there. They tried to prove ours were not carbon pictures, and brought forward tests to prove their assertions, but made a miserable failure of both the plea and the tests. It was very evident they did not know much about chemistry. They built considerably upon the test business, and kept all dark for a long time, thinking they had us; but when it did come out, the thing was so contemptibly mean and transparent, that there was no notice taken of it, altogether, after all their trouble with nitric acid and cyanide of potassium. I was questioned upon the qualities of the latter, and advised the counsel for the other side to try a little upon his tongue. *He didn't try it.*"

SINGHI'S MAGIC PEDESTAL.

BY WELL G. SINGHI.

HIGH enough for any man, and low enough for any boy. No trouble to make it; no work to use it; no need of customers moving when they stand by it, and no patent right on it.

I have used it for five years, and I do not expect to be without one, for it can be used in about eleven hundred and two ways, more



or less. 1 is the outside box; 6 is the inside box; 2 is the crank which raises and lowers 1, so it can be high enough for a man six and a half feet; 3 is the base on which the platform 4 is hung; 5 is a hook to hold up the platform when not in use, and when shut up can be pushed around as easy as a chair, as it has four trunk castors under the base, 3; 2, the crank, is from an old camera-stand, and is on the principle of a snake-screw. The picture with the numbers on is the back of the pedestal, and is to never show in the picture; but if you wish to use that side of the pedestal, stand a chair up to cover the handle, and in that way you can use four sides instead of three. I make a slit in my carpet just large enough to let the platform, 4, under and out of sight, and then stand my customer on the platform. This platform I consider a very important part. Indeed, I would not give very much for the pedestal without it. Lean against the pedestal as hard as they like, it is as firm

with "Balmain's paint," is exposed in the camera, then placed in the dark, upon a dry plate, which is then developed. Warnerke exposes, in this way, with Dallmeyer's rapid rectilinear, a minute; then the gelatin, in the dark-room, by contact, for five minutes. The result is not very perfect, but it offers, nevertheless, the possibility of transmitting light which has been gathered in one spot to another place, so that at the latter place photographic effects can be exerted yet.

In the meantime, much light is shed, from a distance, upon other things.

So, for instance, Paris sent, recently, a new rapid developer to the East. It was not cheap; twenty francs, net, was the price per kilogramme; but it proved to reduce the time of exposure to one-half.

Dr. Eder examined the stuff, and found that it consisted of nothing but a mixture of sulphate of iron with salicylic acid, to which some sulphurous acid had been added.

If the mixture is dissolved in water, it assumes a deep violet color. According to Eder, thirty parts of the developing salt are added to four hundred parts water, and to this twelve parts alcohol and four and a half parts radical vinegar.

The developer thus obtained works, in fact, faster than a common one; but the same result may be reached with salicylic acid, by taking just as much iron as stated above. It appears salicylic acid prevents the formation of fog.

The chief topic of conversation is now the dry plate. No meeting takes place without gelatin claiming attention. In fact, we are nearing the season in which working with gelatin plates becomes difficult. Loosening in the developing and fixing baths, difficulties in preparing, decomposing of the gelatin—these are the summer enjoyments the gelatin process offers.

I had already bravely contended with those evils last summer. They have led me to the idea to thoroughly modify the emulsion process, and to prepare a new emulsion, which does not show the defects of the old one.

My endeavors have ended in success, after innumerable experiments. I have now an emulsion just as sensitive as gelatin emulsion, but which, while it remains unchanged

at the highest summer heat, can be poured on plates as easily as collodion, and placed in the market as such.

This emulsion can be used even wet. It dries in an hour; develops, intensifies, fixes, and washes just as rapidly and easily as collodion plates. The plates are affected neither by boiling water nor by alcohol, and can be dried by the fire like collodion plates.

I will place you in the position to convince yourself of the availability of the matter. I have already taken the necessary steps to prepare the manufacturing of the emulsion for the trade. Of course, it will take some time yet till all arrangements are completed and everything works smoothly.

In the meantime, gelatin plate manufactories seem to start up everywhere. Everybody seems to be aiming at becoming independent of England; and no week passes by without bringing me some sample plates for testing, so that the trouble gets almost too great for me. Yet I find many opportunities thereby to gather new and interesting experiences with gelatin plates.

In my last letter, I remarked that I found Henderson's prussiate of potash developer to work excellently, as it produced instantaneously printable negatives, but now I find that this does not hold good for all plates; for I received, recently, some very good plates, which showed poorer results when treated with prussiate of potash than with the usual developer. On the whole, prussiate of potash acts only as a restrainer, similar to bromide of potassium, only less effective; for one-tenth of a gramme of bromide of potassium has a restraining effect equal to ten grammes of prussiate of potash.

The reason for the greater effects of the prussiate of potash developer is to be found in the greater quantity of pyrogallie acid and ammonia contained in it.

The higher the temperature of the season advances, the greater the danger of the gelatin layers becoming detached from the plates. In order to avoid this occurrence I have had recourse to preliminary coating, with great success.

Here we have used, to this end, gelatin for a long time; but in America albumen is preferred. Here usually one gramme

gelatin is dissolved in four hundred grammes water (warm) for coating plates. Such a solution spoils in summer in twenty-four hours. The coated plates keep much longer, but they offer no advantage to the gelatin process; for, when the warm emulsion is laid on, the gelatin dissolves again. I therefore tried a solution of one part gelatin in three hundred parts of water, which had been treated with six parts of solution of chrome-alum, 1:50.

This solution keeps longer than eight days, even in summer, and produces, as preliminary coating, plates appropriate, to an equal degree, for the wet as for the dry process.

The addition of chrome-alum causes the tanning of the layer, so that it does not dissolve again when warm gelatin is poured on.

The other day, we had a discussion in our meeting relative to the sensitiveness of the gelatin plates. The fact is, that gelatin plates from England are placed in the market here, which are advertised as being ten, yes, twenty times more sensitive than wet plates. I have made comparative experiments with such plates and wet plates, and found the above assertion fully corroborated by facts.

Against this declaration some portrait photographers took exception. They acknowledged, at first, that the plates in question were six times more sensitive than wet ones; but even this concession they did not stick to. In proportion as their experience relative to gelatin plates increased, the sensitiveness, they said, was found to decrease; and now, Mr. Brummer, a very intelligent experimenter, declares that he never found a gelatin plate of more than three times the sensitiveness of wet ones, which assertion was shared in by other photographers.

The same controversy seems to spring up relative to other emulsions.

I placed my new emulsion in the hands of three eminent experimenters for testing, and one found the sensitiveness only one and a half times greater than a wet one, the other found the sensitiveness two and a half times, and the third declared the same to be four times greater. I myself stated the sensitiveness to be three times greater than that

of a wet plate. But I can easily increase the sensitiveness; and I now make plates fully as sensitive as the best English ones.

In order to trace the reason for these different opinions in regard to the sensitiveness of the plates, I instituted a number of experiments with gelatin plates, by exposing the same, simultaneously with wet plates, to light and dark objects. The result showed that for light objects the sensitiveness of the gelatin plates is, in fact, at least ten times greater than the sensitiveness of wet plates; for dark objects, however, the difference is not so marked. For dark objects, gelatin plates show about three times more sensitiveness than wet ones.

Now, in portraits, we have light and dark objects together. Light is the shirt, the hand, and the face; dark, the dress, often the hair, the shaded folds, etc., etc.

In order to obtain a fully-exposed picture, we must expose until even the dark parts appear; and, in such cases, the sensitiveness of the gelatin plates will hardly be found more than three times more sensitive than wet ones.

The case is different in taking photographs out-of-doors, where the object is more brightly illuminated than in the studio, and accordingly the sensitiveness of the gelatin plate will be found to be materially greater—perhaps six to eight times greater than the sensitiveness of a wet plate.

Very truly yours,

H. VOGEL.

BERLIN, May 26th, 1880.

FRENCH CORRESPONDENCE.

New Woodbury Process—Photo-typography of Mr. C. Petit—Medieval Portraits of Mr. Adam Salomon—New Case of French Jurisprudence in the matter of Counterfeit Photographs—Instantaneous Stops.

AN important fact, among the last photographic communications presented to the French Photographic Society, is the new Woodburytype process invented by Mr. Woodbury; the principal object of which is to place within the reach of all photographers a photoglyptic process, simple, inexpensive, and doing away especially with the hydraulic press, a very costly appliance,

the working of which cannot be confided, without fear of costly accidents, to inexperienced hands. The details of this process, already published in the principal journals, can have no place here; but we believe it necessary to insist on the possibility yielded by this process to render more general the use of photography without encountering, as hitherto, an insurmountable difficulty, that is to say, an enormous expense for most photographers.

At the present time there are but three establishments in France in which photoglypty is practised, all three in Paris; namely, Messrs. Goupil & Co., Messrs. Lemercier & Co., and, finally, the *Moniteur Universelle*, where we have put in operation this printing process. Outside of Paris there is no one but Mr. Blaise, at Tours, who has a small photoglyptic establishment, and doing but little work. This is no proof to be urged against the merit of this process, but only against the complications of the working and the cost.

Since we have seen the results attained without the aid of a hydraulic press, we hope to see everywhere adopted this mode of printing, applicable especially to multiple impressions, but not necessarily in very large numbers. We think that the making of from fifty to one hundred prints of a subject would justify the preparation of a photoglyptic plate, the work of which, the negative being given, may be resumed as follows: Making a gelatin print which is developed on a plate, as in the carbon process. The relief thus obtained, the operation of passing under a roller with a sheet of tin-foil, and the coating of this sheet with copper, are neither long nor costly operations. The same may be said of the transfer of the mould, after the copper bath, to another glass plate, which is destined to serve as a final support during the printing and afterwards, if it is desirable to preserve this mould for subsequent use. The immense advantage offered by this new system of making photoglyptic moulds, is not only in the absolute security which it gives in regard to the permanency of the moulds, but also in the possibility of printing from these moulds a much greater number of prints; and, finally, the faculty of preserving and mov-

ing them without fear of injury. If we bear all this in mind, it will be easy to see what an abyss exists between the old method, with the hydraulic press, and the new, which uses instead a simple polishing-roller, having attached to it a well-fixed plate. Mr. Woodbury is now having made rollers of this kind, the tables of which are formed of thick plates of glass, very horizontally placed. In this manner there is no fear of breaking the plate which carries the relief, and on which is counter-moulded the sheet of tin-foil, by a few successive pressures graduating the intensity, which becomes greater towards the end of the operation. We believe that in the United States of America, from which we receive so many beautiful photographic productions, the Woodbury process, simplified and improved as it now is, would prove of very great advantage to the trade.

In regard to climatic difficulties, we do not think that too much importance should be attached to them. The great heat might possibly interfere with printing during a portion of the year, but in that case it is possible, acting as we did at the time of the Universal Exhibition of 1878, to introduce ice in each photoglyptic press, a small drawer, lined with an insulated matter, being placed on the side opposite the bottom of the bed of the press. At a very small expense, it is possible, notwithstanding the great heat, to print as regularly as when the temperature is much lower. We advise, therefore, our worthy American colleagues to make a trial of this printing process, for which it would be impossible, in many cases, to substitute another, and which, to-day, should find a place in every well-organized establishment.

Mr. C. Petit, at the last meeting of the French Photographic Society, presented a number of specimens of a photo-typographic process of his invention, the details of which will probably be reproduced by the *Philadelphia Photographer*. We will limit ourselves, therefore, to introduce in this letter considerations of a less technical character concerning this process, the practical working of which seems to us, however, too complicated. We should make due allowance, nevertheless, in this direction, so

worthy the attention of investigators, of all the efforts being made to change a photographic print into a typographic cliché. Up to the present time, a complete solution of this important and difficult problem has not been reached. The experiment of Mr. Petit, were it not for the complicated operations, would tend towards this solution in a satisfactory degree, not that we should consider it as final, but rather as a starting point. The specimens that we send to your worthy editor, and which we feel sure he will take pleasure in submitting to those persons who desire to see them, will give a pretty complete idea of the results obtained.* Further investigations are necessary, and the problem will only be resolved when photo-typographic printing will be made in the text, and with the text, as phototypic images are now made outside of the text. We should never believe that we have reached true photo-typography, such as we can desire, or, perhaps, *imagine* it, as long as we are obliged to substitute lines and points for continuous modelling.

An article published in the *Photographic News* of the 21st of May last, on the "Boulevards of Paris," alludes to the great favor bestowed upon the beautiful photographic productions of Mora, to be seen in the show-windows of the principal dealers in photographic prints. There is no mention made in the article of the works of your very skilful Mr. Gutekunst, which are equally artistic, as, for example, the portrait of Miss Adelaide Detchon, recently published in this magazine. This may be accounted for, without doubt, from the fact that Mr. Gutekunst does not produce as largely in this particular line as Mr. Mora. When this latter gentleman visited the Paris Exposition of 1878, he brought with him a very remarkable collection of portraits. We had occasion to admire them, one evening, at Mr. Nadar's; and it is this same collection which, shown to the various dealers in photographic prints, has charmed them, and has opened to the distinguished talent of Mr. Mora the market of our capital.

Chief among our French photographers

we must still rank Mr. Adam Salomon, who, unfortunately, after a number of years of labor, during which he has shown what photography can do in the hands of an artist, is now taking a rest, devoting his leisure moments to sculpture. A few years ago, whilst paying him a visit, he informed us that he made no more pictures, so to speak; but he showed us some superb portraits, which might have easily been taken for the reproductions of pictures of the middle ages, and of the sixteenth century, according to the costumes of the persons represented. Figure to yourself a splendid portrait of some count or duke painted by Vandyke, and photographically produced; such was the work of Adam Salomon, with this difference, however—that the original exists, and that the picture presenting the appearance of an old painting is but the recent production of a most successful composition. Many artists will be deceived; and if on a picture of this kind were inscribed the words, "After a picture of Rigaud or any other celebrated artists," nobody would deny the assertion. Connoisseurs might ask where the original was to be found, and express surprise at never having seen or heard of it; and this is what happened to Madame Thiers, when she requested Adam Salomon to inform her where she could see the original picture of which what she had before her eyes was so remarkable a reproduction.

"He lives quite near here," replied Mr. Salomon: "it is the Count ——. He will be much honored and enchanted to receive you, madame."

Now, why is it that Adam Salomon has succeeded in making so much money, and in becoming the most skilful of our portrait photographers? I will give the reason. It is not because he has more or less skilfully penetrated the mysteries of collodion and albumen,—he has given just enough attention to these chemical manipulations to obtain a proper and faithful reproduction of his compositions,—but it is because this artist is an artist, and that he has worked in photography, not as a chemist, but as an artist, devoting himself to lighting, posing, and draping his models, rather than to the formula of collodion employed. It mat-

* These interesting results we shall be glad to exhibit at our office.—Ed. P. P.

tered little to him, so that it was as good as that used by others, whose works were only inferior in an artistic point of view. A sculptor he has remained rather than a photographer; and he has succeeded by simply using, with much intelligence, the marvellous graphic means furnished by science, in producing the work of an artist in photography.

Let us say, in this connection, that, notwithstanding the contests of artists against photography, which they refuse to class among arts, and protect by law as other similar arts, the Tribunal of Paris has just rendered its decision that a photographer produces, at least, in the legal acceptation of the word, works of art, and they are entitled to the same protection as painting, engraving, lithography, etc.

The case in point was that of the counter-

feiting of photographic portraits of Messrs. Frane & Truchilut, by one Casparé, who was sentenced to a fine, damages, seizure of the pictures, and all the costs. In our opinion, no distinction can be made, legally speaking, among the different graphic processes; and the result alone should be taken into consideration, without regard to the manner by which it has been obtained. The only comparison to be made is, not between the works, but between the modes by which they have been produced. It is evident, in this case, that if a work which is purely manual equals in beauty, in delicacy, and artistic value another work, in which chemical and mechanical aid have effected the execution, the greatest merit will certainly belong to the work produced by the hand alone.

LEON VIDAL.

PARIS, May 31st, 1880.

Editor's Table.

PICTURES RECEIVED.—From Mr. G. G. ROCKWOOD, Union Square, New York, a charming picture of a little miss of some three or four summers, with dimpled chin resting on the chubby folded hands, strongly reminding one of the pose of the Raphael's "Cherubs." The lighting is most skilfully managed: chemical effect exquisite, and in all a dainty gem of photographic art. Mr. T. S. JOHNSON, Homewood and Thornton, Ills., sends us various samples of his work. By a skilful management of his light, he obtains most artistic effects with difficult and even unpromising-looking subjects. One of these pictures is a view of Mr. JOHNSON'S home and studio; a pleasant, airy-looking place, shaded by fine trees. Two very fine samples of carbon printing from E. J. SOUBY, New Orleans, La. One is a houdoir portrait of a lady seated at the window reading. The lighting is particularly good, and the pose very graceful. A pretty and effective picture. The other, of "Our Little Duchess," is one of the sweetest child-pictures we have seen for a long time. As a work of art it is very fine. From Mr. BILLINGS, Racine, Wis., some excellent cabinets; good examples of plain photography, where care and judgment are evinced throughout, down to the printing and finishing; the lighting, especially, being very skilfully managed. Mr. F. J. CHESSINGTON, Marysville, Ohio, sends us two panel pictures of little girls,

one seated, the other swinging "under the apple-blossoms." Mr. CHESSINGTON writes us that he was so pleased with Our Picture in the June issue that he at once sent to Mr. NORTH for negatives of his beautiful background. The samples he forwards to us showing his method of using the negative, are very natural, tasteful, and attractive, and have become quite the rage among his customers. Several cabinet pictures of little children, from Messrs. D. & M. STUBER, Louisville, Ky., in which the little folks have done their part remarkably well by retaining their positions without moving in the least; the picture being clear and sharp throughout. From Messrs. DOUGLASS, THOMPSON & Co., Chicago, Ill., two splendid photographs of General J. A. GARFIELD and General C. A. ARTHUR, the nominees of the Republican convention for United States president and vice-president. The pictures were made by BRAND, of Chicago.

APPROPOS of "Apple-Blossoms," one of our correspondents sends us the following criticism, which we shall answer in our next.

"As I am a subscriber to your most excellent magazine, the *Philadelphia Photographer*, it being the leading journal of the day, I am surprised, with others of the craft that I come in contact with frequently, at the quality of its frontispiece. The craft I have reference to are

practical men, that are capable to execute as well as to judge, and are admirers of fine work, and expect such in the embellishment of your journal. Once in a while, it is true, you give us an excellent picture, having points worth studying, but most of the time with but little or no merit. In your June issue we have one entitled "Under the Apple-Blossoms." As a photograph, "technically speaking," it is very ordinary. Perhaps Mr. WALTER C. NORTH will inform us what season he intended to represent; the tree is in bloom, and denotes spring; but what of the ripe apples that lay scattered on the foreground, directly under the tree? Where is the man who has ever seen such in Nature? And what a nice, smooth, hard ground; think you that a blade of grass would be able to make its way through that? The background, the production of Mr. SEAVEY, is a grand piece of workmanship, full of spring feeling, and perfect harmony throughout; it shows a master-hand and a close student of Nature; it stamps him as a true artist; but the arrangement of the foreground is a *farce*. If the little girl sitting on the left in the picture had a package of fire-crackers in her hands, which would be in keeping with the drum and gun the boys hold, then the picture would truly represent the grand combination of *Spring, Fourth of July, and Autumn*.

"Yours truly, L. R. EVANS."

MONS. C. M. TESSIE DU MOTHAY, the distinguished scientist, born in Brittany A.D. 1815, died in New York June 4th, being on a visit to this country. His researches in photography were of great value, and in photo-lithography especially he made some studies which were of great service. We have one of his portraits, made over ten years ago, which quite equals the majority of the artotypes of the present day.

MESSRS. GATCHEL & HYATT, from their St. Louis, Mo., branch, send us their latest catalogue, a large one of 127 pages. The lists are composed of every photographic requisite, offered at reasonable rates. The articles are well described, and many of them illustrated with clear-cut engravings. This firm also offer full lines of choice chromos, picture frames in all designs, wall-pockets, easels, brackets, etc. Give them a trial, ye who are convenient to their trio of stores and cities.

PROF. D. A. WOODWARD asks attention to his solar camera advertisement in "Specialties." His apparatus is excellent, has been long tried, and it is his honest effort to never disappoint any buyer. See testimonials.

MESSRS. CHARLES PAXSON & BRO., corner of Broadway and Houston Streets, New York, send us their Special Price-List for Solar Enlargements. This firm have recently increased their facilities for making enlargements, and are thus enabled to offer this special price-list. Prices are quoted for making enlargements from 11 x 14 up to 60 x 100, also terms for mounting the various sizes and for making the negatives. These enterprising gentlemen are behind in nothing, and their apparatus for printing by artificial light enables them to fill their orders promptly, independent of the weather. Price-lists will be furnished free on application.

OBITUARY.—The New York *Tribune* of April 24th briefly records the death of Mr. ROBERT E. WEEKS, at his home in West Lawrence, N. Y. He was a photographer of good standing in his town, and highly respected as a member of society and a faithful husband and father. His loss will be sincerely mourned by a numerous circle of attached friends.

THE June Price-list of Photographers' Supplies, from Messrs. DOUGLASS, THOMPSON & Co., Nos. 229 and 231 State Street, Chicago, is to hand, full, as usual, of good offers of every style of photographic requisite, at prices varying to suit the means of rich and poor.

Their stock contains a complete line of lenses, camera boxes, and other apparatus; chairs, furniture, accessories, and backgrounds in every style; pure chemicals, mounts, paper, frames, etc. Send for a list, and study it up for information's sake, at least. The new firm are very busy, and people like to deal with them.

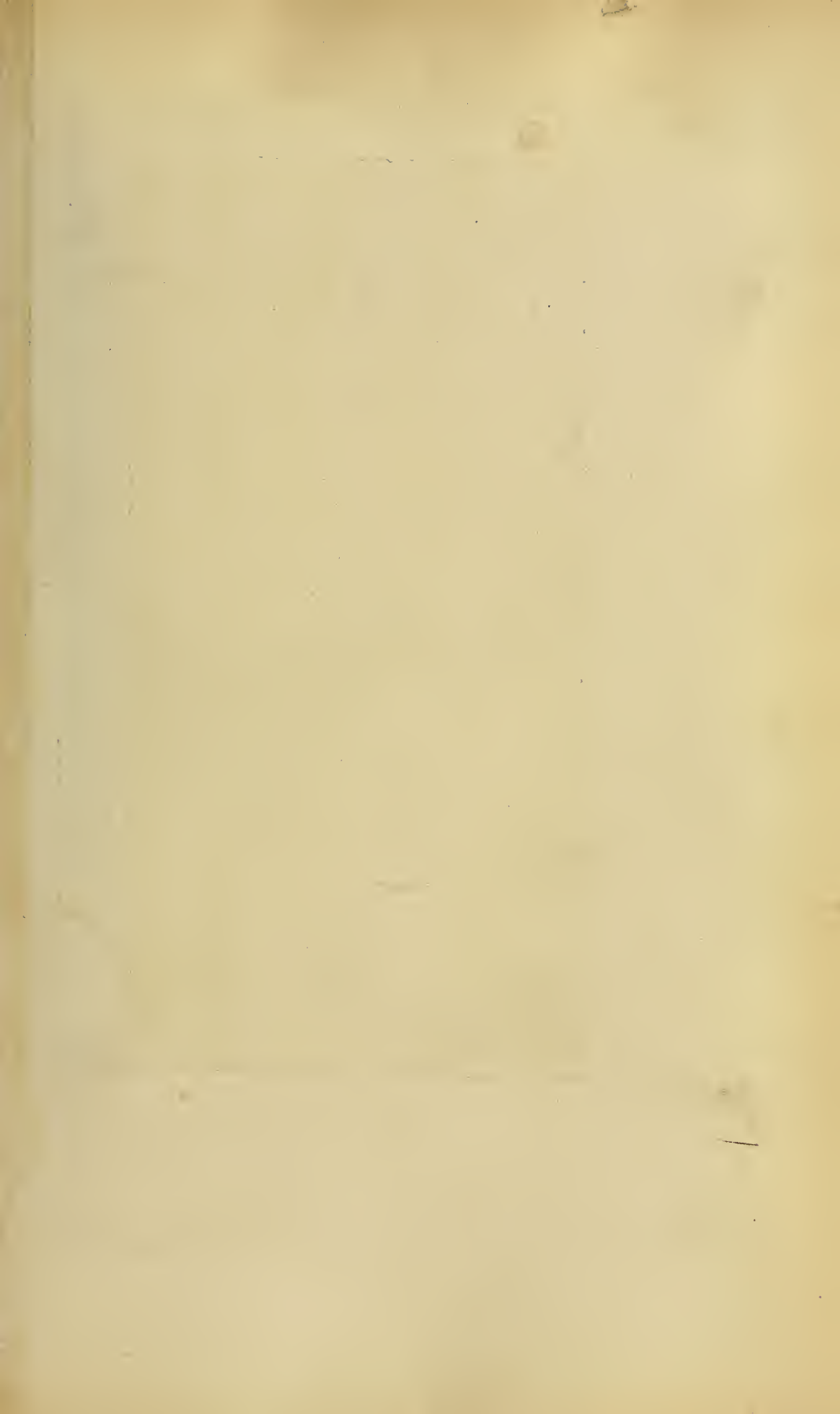
THE "apple-blossom printing-in negatives," Mr. NORTH tells us, are being ordered by many photographers, and many testimonials are sent him, including one from Mr. J. F. RYDER, of Cleveland. A Chicago dealer ordered twenty-four. See Mr. NORTH's advertisement.

MR. O. PIERRE HAVENS, Savannah, Ga., receives a very complimentary notice of his new studio from *The Times*. Mr. H. also rejoices in "a one hundred pound album."

SEVERAL notices of pictures, galleries, etc., are unavoidably laid over. Next month, friends.

THANKS to our friend at Elmira, N. Y., for circular. Glad to get such always.

OUR August number will be ten days late, perhaps, to give "the latest" from Chicago.





J. W. GEHRIG.

CHICAGO, ILLS.

Boston Public Library.

T H E

Philadelphia Photographer.

Vol. XVII.

AUGUST, 1880.

No. 200.

Entered according to Act of Congress, in the year 1880,

By EDWARD L. WILSON,

In the office of the Librarian of Congress, at Washington, D. C.

OUR PICTURE.

ANOTHER example of portraiture is presented for study this month, from one of the rising young photographers of Chicago, Mr. J. W. Gehrig, who, with his fair and obliging subject, has done his utmost to serve us with something excellent. We have printed from six negatives, no two being alike in pose; thus showing the ability of the artist to give us agreeable variety. There are many fine points about them, all of which our practised readers will be quick to discover. The lighting is carefully done, and the retouching of the negative is not overdone, but judicious.

"I wish you would tell us more about the general make-up of your pictures than you do—where to get the furniture, what backgrounds are used, etc.," says a good-natured correspondent, whom a rainy day has evidently caused to grumble at us.

Since it is a reasonable request, we will, once at least, grant it in a measure. The background was made by Mr. Ross, of Chicago, and is known as "No. 95, Ross Interior." In a private letter, Mr. Hiram J. Thompson says: "Mr. Ross has improved wonderfully during the last year. On landscapes he is first-class, but on interiors he is as good as *anybody*." We believe Mr. Ross's fame is growing in the West continually.

One of the most beautiful features of the picture is the stairway accessory, known as

"Thompson's Interior Stairway," the special manufacture of that gentleman, and advertised in the proper place. It is very neat and pretty and effective, graceful in form, not ponderous, when, as in this case, it is used with a harmonious background, so very helpful.

To go on, let us call your attention to the excellence of the paper upon which our pictures are printed. It is also a product of the West, and is known as the "R. & T. Brilliant." We used the pink in preference to the blue, and it is guaranteed not to change color, sundry elements entering into its manufacture preventing this entirely. We find it to work easily; to print rapidly and economically, regularly, and to tone richly, and with little loss from defects. We find a bath forty-five grains strong is the best, made alkaline with liquor ammonia. Tone as heretofore stated by us in describing the formula used for printing our pictures.

To prevent a further grumble, we add, in closing, that the prints were lubricated with "James's American Glacé," another Chicago specialty of Mr. Thompson's, and burnished on our own Entrekin Oscillating Enameler, by our own superior helper in that department, of whom there is but one—the original, and not for sale.

GO TO THE CHICAGO CONVENTION.

AN ESSAY ON THE EDUCATION OF THE EYE

WITH REFERENCE TO PAINTING.

BY JOHN BURNET, F.R.S.

(Continued from page 206.)

HARMONY.

HARMONY in painting is the connection and agreement of one part with another, either as regards form, light and shade, or color; this agreement proceeds either from a succession of the same forms in different degrees of distinctness, such as arise when we cast a stone into water, producing a succession of undulating circles, or by one form depending upon its adjoining for its completion and unity, as is the case in poetry; or the harshness of isolated forms may be broken down, and harmonized with the whole, by their being hinted at, or faintly repeated in various portions of the picture.

FORM.

Burke, speaking of beautiful forms, says, "As perfectly beautiful bodies are not composed of angular parts, so those parts never continue long in the same right line; they vary their direction every moment, and they change under the eye, by a deviation continually carrying on, but for whose beginning or end you will find it difficult to ascertain a point." All authors from Aristotle to De Quincy, having treated of the affections of the mind as if the avenues to each sensation were the same, it will perhaps lead us to a more clear definition of the properties which belong to vision exclusively, by confining the observations on form, shade, or color to their effects upon the eye. As the forms of all objects enter the eye through a circular aperture, those objects containing a similar continuity of form fall most agreeably upon the organ of vision, and are seen, as it were, at a single glance; while objects possessing sharp angles seem less in harmony with the flow of light which accompanies their entrance, and require repeated examinations to gain a knowledge of their exact form. For example, if a circle be presented to the eye, we are incontinently carried round the whole circumference, whereas, when we look upon a square or cubical form,

it requires four separate examinations, each producing a separate effort. Now as the images of all objects are not only viewed through a circular aperture, but are also received upon a circular surface, and as the rays by which such images are conveyed fade imperceptibly as they depart from the centre of vision, these may be some of the causes why circular or undulating forms fall most agreeably upon the eye; especially if we consider that the organ itself moves as it were in a circular motion, by means of its muscles, or, as it is commonly termed, the ball and socket. There are other reasons why circular forms are most agreeable to the eye, arising from an association of ideas, such as the soft, circular forms of children and youth, compared with the rigid and angular forms of age; or flowing undulating lines, conveying a greater idea of motion than lines crossing each other in abrupt opposite directions.

FIG. 45.

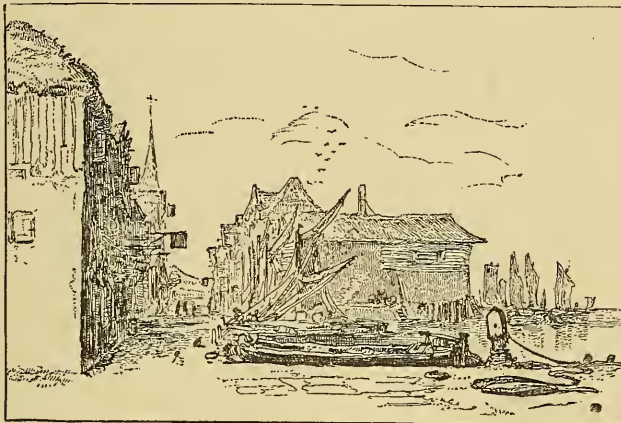


Harmony, consisting of a certain proportion of one part with another, no figure or shape can be harmonious or agreeable unless this arrangement is complete, so as to produce a unity to the eye, or a balance of one portion with another, such as the preponderance of perpendicular lines being counteracted by those running in a horizontal direction, or oblique lines antagonized by opposite obliquities, convex by the presence of concave, all mingling together in regular adjustment; as in music we find harmony produced by a combination of sounds different in themselves, yet affecting the mind through the

medium of the ear, with one result. Aristotle, in his *Treatise on Poetry*, says: "Beauty consists in magnitude and order;

upon the eye, is often taken advantage of in regulating the boundary line to a composition; thus we often see a single head of a

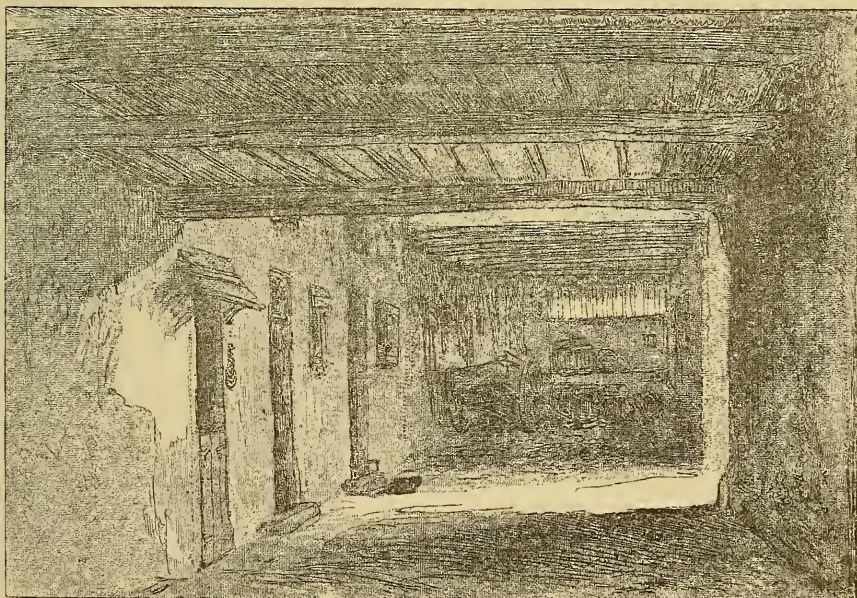
FIG. 46.



but no animal, or other thing, can be beautiful that is either too small or too large for the eye to take cognizance of its several

child, or a group consisting of an assemblage of curved lines, reach the eye more agreeably through a circular frame, as in that case the

FIG. 47.



component parts at once, as in that case the whole, or unity, is lost to the spectator." That extension of form so conducive to harmony, and productive of an agreeable effect

sensations which arise from such a combination are not disturbed or interrupted; so, likewise, the sight may be conveyed with greater pleasure, and with an increased per-

spective effect, through a square or oblong aperture, by having the horizontal and perpendicular lines of the frame repeated as they depart from the eye, in diminished lengths and strengths and magnitude, as in Fig. 47, also in the curved and horizontal lines of the architecture of the School of Athens, the Heliodorus, etc. This mixing up the frame or opening with the work is often of the utmost importance, even when extended to the effect of light and shade and color, as it breaks down that harshness which otherwise attracts the eye, while examining the work contained within it.

(To be continued.)

OLD THINGS IN NEW DRESS.

BY THE LATE JOHN L. GIBON.

(Continued from page 207.)

A very Good Intensifier may be made as follows: "Make a saturated solution of anilin-orange and negative varnish. Add sufficient of it, to attain the density required, to the varnish when varnishing the plate. Very good printing density may be secured in this way, and the color will not change in the sun."

To Reduce the Thickness of Old Collodion.

—"Landscape photographers in particular are often exceedingly annoyed by the thickening of their best-working collodion. Alcohol has been advised as a thinning agent, and though successful in the one way, it is deteriorating in another; for as the thickness is reduced, in the same proportion is sensitiveness sacrificed and exposure lengthened. Ether is therefore far preferable, and reason will soon convince one of this. The thickening of the collodion is caused by evaporation. What is the most volatile ingredient in collodion? Ether, of course. Hence, when the collodion is thick, we may know the ether has in a measure evaporated.

"This may be an old recipe; nevertheless, it is a good one."

Trouble with a Gutta-Percha Dish.—

"Gutta-percha alone is a very bad material of which to make nitrate bath-holders. It contains naturally much tannin, and nothing can be worse for silver baths than a reduc-

ing agent, however small in quantity. It is very well known to practised photographers that new dishes of this material are worthless at first; and there are some kinds that are altogether unfit for use. I will give some of my personal experience.

"Having previously made use, successfully, of gutta-percha dishes, with the same apparatus, and the new dish which I employed having, through excess of precaution, been covered with lac varnish, I had no uneasiness on that score; yet any amount of non-success was caused by that very dish before I discovered the real cause.

"The bath maintained its clear condition, but the pictures invariably made me regret that I had employed it. I was using, at the time, two batis, one in a porcelain dish, the other in the gutta-percha dish. The pictures obtained from the first were of an unexceptionable purity and intensity; while in operating with the same collodion, the same nitrate bath, and the same developer, the plates dipped in the gutta-percha dish were weak and fogged, the feebleness and fogging increasing with each succeeding plate. I then changed the bath in my porcelain dish, putting into it the solution from the gutta-percha dish, and the proofs were fogged as usual.

"By this decisive experiment, I became satisfactorily convinced that the repeated failures, which I had attributed first to the collodion, then to the plates, then to the apparatus, were actually due to the gutta-percha dish.

"After that I decided that I would never again use gutta-percha dishes or baths to contain solutions of *nitrate of silver*."

A Delicate Test for Nitric Acid.—"To a drachm of oil of vitriol, diluted with an ounce of water, add ten drops of commercial anilin. If not colorless, decolorize with animal charcoal. Put a little oil of vitriol on a porcelain plate, add half its bulk of anilin solution, dip a clean glass rod into the solution to be tested, and draw it through the mixture on the porcelain plate. If any nitric acid be present, a red streak will be produced."

A Test for Alcohol.—"Put a small quantity in a saucer, and set fire to it. If it is

pure, it will *all* burn up, and leave the saucer dry; if it is impure, the alcohol will burn, and leave the water."

To Test Ether.—"An excellent method of testing ether for photographic uses is to dip a piece of litmus-paper in the ether, which will at once show whether or not it contains acid.

"Another test to show its purity will be to place a crystal of iodide of potassium in a small bottle, cover with ether, cork well, and allow it to stand for an hour. If at the end of this time the ether remains unchanged, it can be safely used; if it changes to a dark-red color, it is impure."

Blackening Brass Surfaces.—"For restoring the black surface of the interior of lens tubes, when injured or broken away, use a weak solution of shellac in alcohol, mixed with lampblack. Another plan is to dissolve sugar in brandy, adding the lampblack. Gelatin will also answer, or gum-water, for holding the black on. Whatever adhesive material is employed, just enough should be used to attach the lampblack; otherwise a reflecting surface is produced, which is, of course, very objectionable."

Another Evil Effect of Tobacco among Photographers.—"We quote the following from a paper by Mr. H. H. Snelling, published several years ago.

"There is another cause of destruction to the photographic prints,—at all events, to those that are retouched,—namely, tobacco. I am not prepared to say that tobacco *smoke* will produce fading, but I know that its juice will. Having frequently noticed a peculiar decomposition in prints retouched with India-ink and water colors, I was, for some time, unable to account for it. It at last struck me that tobacco was the cause.

"We all know how prone the artist is to moisten his brush with his saliva while at work. Here I looked for the cause, and, with pipe in mouth, I sat down before a fine print to try the experiment, and as I went over it with my brush, alternately moistened the brush between my lips and in a cup of water, being careful to wash out all the saliva before applying it to the water.

"The result was, that wherever the saliva, impregnated with the tobacco smoke,

was placed, there decomposition set in, and gradually spread, while the other portions remained unchanged."

To Prevent Sore Hands from the use of Printers' Chemicals.—"Printers are often troubled with sore hands, from being obliged to plunge them into one strong chemical solution after another, in toning and fixing their prints. Various preparations have been recommended and used. Here is one within the reach of one and all:

"When the day's work is over, in washing the hands, *scrub* them *well*, all over, with a stiff nail-brush. This will remove the chemicals, which, when left on the skin, close the pores, and cause the troublesome soreness. The friction also acts as a healthful invigorator."

To Remove Silver Stains from the Fingers.—"Wash the fingers with a solution of sulphate or chloride of zinc, made as saturated as possible, and slightly acidulated. While the fingers are in the solution, rub the blackest parts with a rod of zinc, to facilitate the reduction. After the stains have disappeared, rinse them in plain water, and then wash well with soap and water. By this plan, the hands are made entirely clean, and no trace of poison left in the skin."

To Purify an Old Sponge.—"After a sponge has been used for some time in a dark-room, it loses all its valuable qualities, becoming black, hard, and greasy, contaminating everything with which it comes in contact. It is often desirable to renovate it, which can be done in the following manner:

"Prepare a solution of permanganate of potash in water, of strength to become a wine color, and into this the unserviceable sponge is immersed, and left for some time, until thoroughly soaked. When taken out and squeezed, it is next put into a solution of muriatic acid (about one part acid to ten parts of water). Let it soak in this for some time, then wash in plenty of water, and it will be as good as new."

BOOK BARGAINS.—The stock of cheap books advertised by us is fast becoming exhausted. Buy before you lose the chance. They are all well worth the money.

HOW GOOD PHOTOGRAPHERS WORK.

BY THEMSELVES.

(Continued from page 212.)

IN order to make the responses to our questions more easily understood, we repeat the list of our

QUERIES.

1. How do you supply yourself with distilled water for your bath?
2. How do you keep your solutions cool in hot weather and of equal temperature?
3. What is the best formulæ in your hands for bath, collodion, and developer, which work in harmony?
4. How do you keep your paper from turning yellow in hot weather?
5. What is the best way to wash prints where the water supply is small?
6. What is your method of lighting the subject ordinarily?

In answering, use drawings if you wish.

This is an open letter to *all* of our readers, and we shall be glad to have their views in such measure upon these subjects as they have the time to give for the good of the craft.

THE RESPONSES.

FROM W. F. KIDNEY (OPERATOR AND POSER WITH C. D. MOSHER), CHICAGO, ILL.

1. For distilled water I always keep water in the sun. Put ten grains of silver in a bottle, then fill with water, and let remain in the sun until clear. I find this the best way to distil.

2. I never tamper with my bath in hot weather; always keep collodion and developer on ice in July and August; I keep two bottles of developer, one on ice and the other off. When wanted, I take half and half, and mix; I never have fogging in this way.

3. I keep the bath thirty-five grains in summer, and slightly acid.

Collodion.

For summer I use the cadmium.

No. 1.—Ether,	40 ounces.
Alcohol,	40 “
Iodide of Cadmium,	320 grains.
Bromide of Cadmium,	160 “
Bromide of Ammonium,	40 “

No. 2.—Ether,	12 ounces.
Alcohol,	12 “
Iodide of Ammonium,	90 grains.
Bromide of Potassium,	50 “

Developer.—Make stock solution, and reduce as wanted to strength of fifteen grains by hydrometer; to the ounce take 16 ounces solution fifteen grains strong, add one ounce acetic acid; filter for use.

4. To keep paper from turning yellow, we use the following silver solution (make stock solution of citric acid):

Water,	10 ounces.
Citric Acid,	100 grains.
Silver,	40 grs. to oz. of water.

To every forty-eight ounces of solution add three ounces of alcohol and one ounce of citric acid solution, when it will turn milky; add a few drops of nitric acid at a time until clear; fume paper ten minutes; filter and silver one and a half minutes.

Toning Bath.

{ Sal-Soda, Saturated Solution,	1 ounce.
{ Water,	$\frac{1}{2}$ gallon.
Salt,	$\frac{1}{2}$ ounce.
Citric Acid Solution,	$\frac{1}{4}$ “
Alcohol,	$\frac{1}{4}$ “

Use the same citric solution as for silver bath.

In regard to the fifth I cannot answer, as there are so many ways. As to the best way of washing prints where there is not much water, I would say it was in flat trays, changing from one to the other. As to the sixth, friend Wilson, that is a “calker,” as you know every operator lights differently from his neighbor.

FROM E. A. SCHOFIELD, MYSTIC RIVER, CONN.

I WILL try to answer your few questions as plainly as I can.

1. I do not use distilled water at all. (I formerly collected snow in winter, which I melted in a large porcelain dish; this I put away in clean bottles.) I now use water from a cement-lined brick cistern.

2. Were I in some places, I hardly know how I should manage to keep my solutions cool without using ice. But I work with the window in my dark-room open, and a cool breeze from off the river comes in. I

will tell you how it is. The window in my dark-room is on the south side of the building, and in summer you know what air there is usually from that quarter. I put up a board, say six or eight inches wide, in front, and two or three inches from the window; then the window can be raised nearly the width of the board. Now put up a screen of yellow paper on a frame, or any other yellow screen, a few inches above the top of the board, against the window, and projecting into the room far enough to catch all of the actinic rays. I think you get my meaning.

3. For my bath I use silver prepared by Edward R. Squibb, M.D. I like this best of any on the market which I have tried. For each ounce of silver I use twelve ounces of water, and make slightly acid with C. P. nitric acid.

My collodion I gave you awhile ago; however, I will give it here. I take equal parts of ether and alcohol and Anthony's Climax cotton. I use from four to five grains to each ounce, as the case requires.

Iodide of Ammonium, . 5 grs. to the oz.

Bromide of Potassium, . $2\frac{1}{2}$ " "

Here is another which I have found to be good.

Ether and Alcohol, . equal parts.

E. A. Climax Cotton, . 4 grs. to the oz.

Iodide of Ammonium, . 3 " "

Bromide of Cadmium, . $1\frac{1}{2}$ " "

Iodide of Cadmium, . $1\frac{1}{2}$ " "

My developer is as follows: Iron solution, 20 grains strong; to 8 ounces of this I put 2 ounces of acetic acid No. 8. I filter the solution before I put the acid to it.

4. I have never found a formula for preventing paper from turning yellow in hot weather which suits me. My plan is to print and tone just as *soon as possible* after silvering. I think this plan gives better results, and should recommend it.

5. I want plenty of water to wash my prints. I hardly know what I should do if I were fixed so I could not get it.

6. My method of lighting the subject *ordinarily* is to sit my subject so the light will fall across the face in the manner shown in the accompanying sketch of my operating-room.

Fig. 1 shows how I arrange the camera (at c) and the background (gg) for the

FIG. 1.

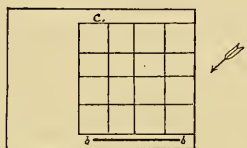
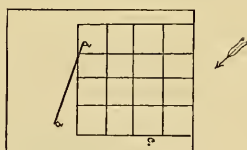
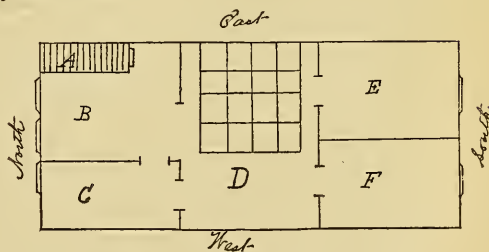


FIG 2.

left side of the face, the light coming from the direction of the arrow.

For the right side of the face I arrange as shown in Fig. 2, the figures and letters meaning the same as in Fig. 1.

My light is an east top-light about 10 feet high at the lowest part, and about 15 feet at the top. I have no side light at all. The force of the light seems to enter in the direction of the arrow, at least it seems so to me; of course I do not mean you to understand by my expression "force of the light," that I mean the sun; not so. I mean when the light is curtained or in a dull day, or in the afternoon when the sun is well over. Here also is a rough sketch of my rooms. For standing figures, I have to go out in my reception-room, as you will see.



A is the entrance; B, the reception-room; C, the retouching- and printing-room; D, the operating-room; E, work- and store-room; F, the dark-room.

FROM R. UHLMAN, ST. JOSEPH, MO.

1. MISSOURI-RIVER ice, or Missouri-River water, is what I fill my bottles with;

throw in a few grains nitrate of silver, expose to sunlight, and in a day or so the water is as pure as crystal, ready to answer for any distilled water.

2. I judiciously located my dark-room so that outside heat cannot strike it directly. I sprinkle my dark-room frequently, and do not bother until the thermometer in same runs up to and over ninety degrees Fahrenheit, when I run a shallow pan, filled with ice, under the box containing the baths, and also cool off the developer and collodion in ice-water, once in a while.

3. My bath I keep from thirty-five to forty grains strong (in hot weather I lean towards the thirty-five grain bath), well iodized, slightly acid. I am always working two baths, a one- and a two-gallon one. I invest, without stint, in nitrate of silver baths. I have always some of them out sunning besides the ones in use, and consider the money invested that way as bearing big interest. I am working, very successfully, collodion made after a receipt you were kind enough to give me several years ago, with the modification, that I filter the salts after dissolving them into the alcohol and ether, which I think gives it more stability. In making collodion I think it an advantage to use two different brands of gun-cotton. My developer is as follows: To a sixteen-ounce iron solution (twenty grains by hydrometer) add one ounce of acetic acid, and when it happens that I have been working a bath for some time, I add a few drops of alcohol to the developer.

4. We blot our paper directly after silvering, and only fume as we use the paper up, and try to get through our printing by two o'clock.

5. After taking them out of the hypo we put them through two different salt solutions, to kill the effects of the hypo, and wash them, by taking each print separately, from one deep pan, filled with fresh water, into another, changing that way about eight times, and mount without delay.

6. I have my sky- and side-light well screened, but only use screens where and when the sun bothers me. I move all over the room to get effects to suit me, and put, altogether, more stress on timing and developing the negative just right. I claim, if

a subject be ever so well and artistically lighted, and the photographer fails to time and develop his negative correctly, his picture will be an inferior one.

I append the collodion receipt you gave me (August 15th, 1878).

Ether,	32 ounces.
Alcohol, 95 per cent., .	32 "
Iodide of Ammonium, .	160 grains.
Iodide of Cadmium, .	160 "
Bromide of Cadmium, .	60 "
Bromide of Ammonium, .	60 "
Gun-cotton,	240 "

Dissolve the salts in the alcohol as numbered, then add the ether gradually, shaking as you add.

I use full four grains of gun-cotton per ounce of solution, for the above collodion.

FROM J. E. WATSON, DETROIT, MICH.

ONE of the chief blessings of our beautiful city is the pure lake-water supplied for the use of the residents.

The purity of the water relieves us from the necessity of using distilled water for the negative bath. Our practice is to fill glass jars with water, putting them in the sun and throwing in a few grains of silver, which throws down all the dirt and impurities in the water. Decant off the pure liquid, and keep in jars to be used as required. When pure water cannot be had, for example, when the presence of lime or other impurities makes its use impracticable in the bath, the following plan has been tried with success:

Fill your glass jars with ice broken into small pieces and washed. When melted throw in a few grains of silver in the jar, and place in the sun; you will be surprised at the very small amount of impurities which will be thrown down. Draw off the pure water for future use. You can safely label the bottles "pure water."

A photographic friend in the country procures his distilled water from the druggist, who, in turn, procures it from the steam-boiler of a saw-mill, subject to the action of grease, dirt, etc. Of course, fine results cannot be had in such a case.

Let me suggest to photographers whose water supply is limited, that prints can be washed clear of hypo by putting them

2. Our dark-room, planned by I. W. Taber, thirteen years ago, is so built that a current of air circulates around the outside of it continually. A wet cloth around collodion-bottle helps the matter. Washing plate-holders frequently is very good.

3. Collodion.

Iodide of Ammonium (French),	. . . . .	5 grains.
Bromide of Cadmium,	. . . . .	3 "
Pyroxylin,	. . . . .	5 "
Ether,	. . . . .	$\frac{1}{2}$ ounce.
Alcohol,	. . . . .	$\frac{1}{2}$ "

It works well in our climate, in-doors or out.

Bath.

Ice-water,	. . . . .	256 ounces.
Nitrate of Silver,	. . . . .	10240 grains.

Set in the sun for weeks, and carefully filter; made slightly acid; works finely. When surcharged with aldehyde, pour into evaporating-dish; neutralize with liquor ammonia or bicarbonate of soda; boil down one-third; add more water and silver if you wish, and when forty grains strong, set it in the sun till ready to use.

Developer.—Take double sulphate of iron and ammonia (receipt as per page 138, *Monographs*, 1880), and use carefully. It is sure to work with the above collodion and bath.

4. Paper, to keep white in hot weather, should be treated as differently as there are different brands used. Sixty grains strong silver solution, with small piece of alum in funnel to filter. Silver one to three minutes, according to weather and paper, and fume—some kinds, soon as dry; others work better to fume only as used, and keep in tight and cool drawer afterwards. Before silvering, moisten paper in box over dish of water. Keep your ream of paper in a cool drawer and clean.

5. Where water is scarce, by having it in a tank or tub, some distance above the level of your washing-sink, you can economize it by bringing from your source of supply a small pipe, and by holding a piece of three-eighths- or half-inch rubber tube in one hand, compressing the mouth of it with thumb and finger. Place every print, one at a time, on a glass plate, and shower them from the hose in hand. You can, by turning them, wash rapidly and thoroughly, and find they will keep for years.

6. We ordinarily use light from the north; mostly top-light; sitter at west end of room. But *neither* our position-chair nor camera is *nailed down*. Hence, like the cooper and his cask, we walk round them as occasion requires. Having a light nearly north-west, we are more susceptible to changes of strength in light as seasons advance and recede, and as the sun rises or falls. Indeed, I think more depends on the altitude of Father Sol than any other one thing, Hugh O'Neil's brain receipt excepted. Our peculiar long dry season, from last of March till latter part of October, usually without a drop of rain, parches the earth, and makes it a reflector of heat so strong that the majority of our population are a peculiar color of tan. I have seldom noticed such a shade of color elsewhere; and it is not the most desirable shade for magnificent photographic results.

Our skylight is 13 feet 6 inches wide, east and west; 18 feet 6 inches up and down; side-light, 13 feet 6 inches wide, meeting skylight seven feet from floor, and coming to within one foot of floor. Spring rollers on skylight; sliding curtains on side-light.

FROM H. ROCHER, CHICAGO, ILL.

I HASTEN to reply, to the best of my ability, to your queries.

1. I use hardly any distilled water, but in compounding my solutions I resort to boiling; otherwise, I put a few crystals of nitrate of silver into a gallon bath of lake water, and sun it and filter.

2. *My Solutions.*—Silver bath is kept cool by wrapping around the glass bath-holder wet linen cloth. Collodion is kept in an ice-box. In winter, I keep the temperature up to 70° Fahr., and all goes right.

3. Silver bath, forty grains, nearly neutral, made up of fused silver; boiled, and while boiling the iodizing is put in, and in about fifteen minutes afterwards a few drops of liquor ammonia are added, boiling down to the proper strength, and filtered when cool.

Developer.

Sulphate of Iron,	. . . . .	5 ounces.
Water,	. . . . .	6 "
Acetic Acid,	. . . . .	8 "
Alcohol (filtered),	. . . . .	2 "

Collodion—Stock.

Climax Cotton (to a gallon collodion), . . .	2 ounces.
Ether,	3 pints.
Alcohol (sensitizing), . .	2 “
Double Iodide of Ammonium and Cadmium, .	1 ounce.
Bromide of Cadmium, . .	80 grains.
Bromide of Ammonium, . .	80 “
Alcohol,	17 ounces.

To iodize, take one pint iodizer and three pints plain collodion.

4. I use eight and ten kilos S. & M. Dresden pink brilliant paper on sixty grains plain silver solution, made alkaline by carbonate of soda. Float one to one and a quarter minutes. After drying, fuming from ten to fifteen minutes. Does not turn yellow during the day; no blisters.

5. Washing is done in a zinc tank, 30 x 40, with false bottom, and the water frequently let off and renewed. Sometimes we use the squeegee, but only in case of extreme hurry do we resort to it.

The lighting is not easily described. From a northern side. Skylight with curtains moving up and down, and by judiciously using them obtain any effect; but the eye needs to be educated to see the effect sought to be produced. Experimenting is the only way to get at the right mode of lighting.

If you can use this communication for the benefit of the craft, I will be very glad to have it go to print.

FROM S. R. STODDARD, GLENS FALLS, N. Y.

As my photographic work is exclusively viewing, some of your questions are unanswerable.

1. I fear I am terribly unscientific in these matters. I find no trouble in using water from the regular village supply; or, if away from home, I dip it out of the first pond or stream I come to, add a few drops of silver to purify, and a little of my regular collodion to sensitize; and it is ready for work.

2. Cannot do it any way. I have all I can do to keep cool myself. However, the collodion-bottle may be kept in a dish of water, which helps the matter some.

3. Negative Bath.

Nitrate of Silver Crystals, . .	14 ounces.
Water,	1 gallon.
Sensitized Collodion, about . .	1 ounce.

Collodion.

Alcohol,	10 ounces.
Ether,	10 “
Iodide of Ammonium, . . .	100 grains.
Bromide of Cadmium, . . .	40 “
Pyroxylin,	100 “

Developer.

Protosulphate of Iron, . . .	1 ounce.
Acetic Acid,	4 ounces.
Water,	16 “

Fix in weak solution of cyanide of potassium; dry, and strengthen if necessary, by an immersion in bath; and redevelopment with iron solution reduced one-half.

4. Similar to No. 2. Try a weaker solution of silver, shorten the time of floating paper to its minimum, and tone as quickly as possible after silvering. Of course, it should be kept as cool as can be.

5. Increase the supply.

6. Direct sunlight; the brighter the better. I do not like a view under clouds; and I am forced to acknowledge that all my “moonlight” pictures are frauds—taken in the daytime.

FROM W. E. BOWMAN, OTTAWA, ILL.

1. I MAKE bath of ice-water, clear by standing in sun a few days.

2. I keep the developing-room well ventilated; use no ice among chemicals. Vary time in sittings with temperature.

3. Bath thirty-eight grains of silver to one ounce of ice-water, iodized with iodide of potassium; collodion, equal parts of ether and alcohol, and to each ounce of mixture add

Iodide of Ammonium, . . .	4 grains.
Iodide of Cadmium, . . .	2 “
Bromide of Cadmium, . . .	2 “
Cotton,	5 “

Dissolve cotton in ether and alcohol. Grind the salts in a mortar, with small quantity of plain collodion; then add the salts to plain collodion, shaking while adding—shake well. Will be ready for use in three days; will work better as it grows older.

Developer.

Soft Water, . . .	16 ounces.
Acetic Acid, No. 8, . .	1 ounce.
Protosulphate of Iron, . .	1 "
Alcohol, . . .	$\frac{1}{2}$ "

4. We silver the paper the day we print, and do not give it time to turn yellow.

5. I would recommend two trays, changing water frequently, and change prints one by one, often. (I consider plenty of good water indispensable to a good gallery.)

5. About two-thirds of our sittings are broad lighting, and one-third broad shadows. Two-thirds of sittings are bust, and one-third is three-fourths or full figure.

FROM M. WOLFE, DAYTON, OHIO.

I SHALL be well pleased if the following answers to your questions will be of service to any of the many readers of your valuable *Philadelphia Photographer*.

1. I do not use distilled water. I select good, pure ice; melt, put some silver in it; set out in the sun to clear, then filter, and you have the purest article I know of for your baths, at the least expense and trouble.

2. I do not find it necessary to use artificial means of lowering the temperature of my solutions, even in the hottest weather. I keep my rooms well ventilated and clean. I mop out my dark-room every morning. I keep my collodion of proper consistency for hot weather, etc.

3. I use about the simplest collodion made, to wit:

Alcohol and Ether, . .	equal parts.
Iodide of Ammonium, . .	$4\frac{1}{2}$ grains.
Bromide of Cadmium, . .	$2\frac{1}{2}$ "
Cotton, . . .	5 "

To ounce of solution. Dissolve the salts in the alcohol, then add the cotton, and lastly the ether. With some samples of cotton the collodion will turn red, especially in hot weather; in that case it is best to wash the cotton in ammonia water.

With this collodion I use a nitrate bath of about forty grains to the ounce.

For my developer I use double iron and ammonia for general use, of the strength of twenty-five grains to an ounce; acetic acid, one ounce to fifteen. For redeveloper I use pyro, ninety grains; citric acid, sixty grains to twenty ounces of water. Take of

this *quantum sufficit* to flow the plate, to which add a few drops of thirty-grain silver solution. No danger of fogging with this, and any intensity desired can be obtained.

4. The best plan to work paper in hot weather is

I. To keep the silver solution of proper strength and purity.

II. To silver at the proper time.

III. To dry the paper quickly.

This is very important. I have my printer draw the paper over *two glass rods*; this removes all of the surplus solution, and the paper will be perfectly dry in a very short time. Of course, I can only give you my principle of working. A whole treatise could be written on printing, and I would respectfully refer the reader who desires improvement to Hearn's *Practical Printer*.

5. I would suggest to make the *water supply larger*. When I was in Richmond, Indiana, I had for water supply a cistern of about two hundred barrels capacity, and with the amount of business I did there I had to be very careful of it, especially in summer. In washing my prints I stayed right with them, changing them often, and keeping them *stirred up*, and found that by so doing a surprisingly small quantity of water would do the work of elimination, and do it well. It requires less of rain, or soft, than of hard water.

6. There have been articles and drawings in your *Philadelphia Photographer*, and other publications, that give the principles of lighting and shading much better than I could condense in this article. They should be *found and studied*. My principle of lighting is to use as direct light as possible, diffused only to the extent of softening and blending what otherwise would be abrupt lines and harsh shadows. Each face is a study, and should be treated accordingly.

(To be continued.)

THE Chicago Convention will be fully reported in this magazine. As we have arranged to be there in person, with ample assistance, our readers can be sure of having the very best independent report that will be printed—so we believe. Our issue will be later than usual—necessarily.



Answers.

To E. B. CORE.—When nitric acid is exposed to sunlight a partial decomposition takes place, which causes the liberation of nitric peroxide (NO_2). This nitric peroxide acts upon metallic hydrates and basic anhydrides, giving rise to the formation of nitrites and nitrates. It is quite possible that nitric acid containing nitric peroxide may act upon oxide of silver or reduced silver in a negative or other bath, and thus cause the formation of *nitrite* of silver, which is believed to be the cause of *fog* in some cases. Or, the bath being acidified with such acid, the formation of nitrite of silver might occur during the process of developing the negative. In any case, the best plan would be to try the effect of some fresh, pure nitric acid which had not undergone any chemical decomposition. If this still produced a foggy plate, the fault might be found in the nitrate of silver, internal reflection from bright surfaces in the tube or camera, or other causes familiar to most photographers.

GEO. BRINTON PHILLIPS,
Of Phillips & Jacobs, Philadelphia.

I WILL try and aid you, good *Sphynx*, in answering some of the queries which do puzzle you; but let me say, first, that while I make no claims to possess chemical knowledge, and am also poor, "as the gates of hell do I detest the man who, tempted by his poverty, deceives with lying words." So what I give you is the best I know, in answer to the five inquiries which follow Mr. Core's in your last.

1. Any iodide will serve for iodizing the bath. Cadmium and potassium are the best; the latter is the most used. I cannot say where any difference will be seen in the de-

tail; that is more dependent upon the salting of the collodion.

2. Fusing will make but little change in the iodide in your silver, for the quantity is so small (say, usually one to four hundred) as to make it scarcely perceptible.

3. Try it, and see what will become of you. (Make preparations for the funeral *before* you proceed). *Fusing*, my dear boy, is generally resorted to for ridding the silver of any traces of nitric acid which may be in it, thus making the preparation of the bath easier.

4. I cannot do better than to recommend your careful reading of Chapter XXII of the second edition of Hearn's *Practical Printer*, page 104, on "Acidifying the Prints." Be sure you do.

5. That beats me. I never thought it would pay me to try.

Yours in the cause,
"PAPER WASTE."

To "DELTA."—The prints in Mr. Hearn's *Practical Printer* are printed in our own printing-rooms, after the formula given by Mr. Hearn in his book, substantially. Probably you do not secure them because you tone in too great haste. Use gold enough *only* to tone in, say, seven minutes. If you *will* tone rapidly, you cannot obtain "rich, purple-brown tones."

SPHYNX'S EDITOR.

To "DELTA."—That second query of yours has puzzled wiser heads than ours. If we knew the secret of the salting used by the albumenizer, perhaps you could be satisfactorily answered.

In answer to your question three, let me ask, are you *sure* that your various baths *are* always "the same at all times"? I do not see how you can be; though, even if you were, I would not guarantee any chemicals to work together "the same at all times." I do not know anything so like in their nature to the "American mule" as chemicals. They will kick back at you when you are feeling most kindly to them. Your great care should be not to *feel* hurt, even if you are. There is *always* a cause for any obstreperousness. Let that comfort you.

A SYMPATHIZER.

To "FLIPPO."—All the remedies you use

for rectifying red printing-baths merely "patch up" the thing, so long as you continue to multiply the causes. If you will read pages 27, 28, and 29, of the second edition of Mr. Hearn's *Practical Printer*, it will help you very much. If you are *living* without this book, you are as great a wonder to me as my prints sometimes are, though I have that same book prominently about.

Queries.

I WANT *Sphinx* to tell me the cause of collodion, after having been salted and appearing a good straw color for two or three weeks, to all at once become as clear as plain collodion, and what will remedy it.

I must add here, that I like the *Philadelphia Photographer* better than ever, and prefer it to any other, because it treats on the practical part of every-day work, and not too much high-flown chemical experiments, which are of little or no use to the man who has to work for the dollar.

Wishing you every success.

FRANK PATTRID.

A FEW months ago we sent you some prints which were spotted badly, and asked your opinion of the cause. In your answer you asked for a full description of our manipulation of the paper, etc. Here it is:

We kept our stock of Hovey's ordinary pink paper in a box or press similar to a large printing-frame. Our bath was forty-five grains strong, slightly acid (kept in order by treating with liquid ammonia and a small lump of alum, and then nitric acid). The paper was floated one and a half minutes, and fumed from twenty to forty-five minutes. After fuming, the paper was put in a box lined with blotting-paper in the printing-room. After printing, washed in two waters (rain-water), then in a weak solution of common salt, and then another wash of water; toned in a bath of gold neutralized with washing soda, then another wash of water, and fixed in hypo, one ounce to eight of water, for ten to fifteen minutes; then salt solution, to prevent blistering, washed in one water, stacked in piles of twenty or thirty prints, placed between white rubber cloths, and washed with running water, and a rubber-roller passed lightly over them for ten minutes, then separated, and passed

through two waters; stacked together, and mounted with *fresh* starch-paste, placed in a book of pink blotting-paper, and left in all night. In the morning we discovered small white spots on some of the prints, but do not *think* they were the same spots exactly as the ones that troubled us; neither were they caused by dust in printing. The prints were soaped with a *paste* of white castile soap and water, a sponge being saturated with the paste, and then nearly dried before rubbing the prints; burnished in the usual way, of course. It was not until about three months after that prints began to be returned to us.

So far as we know, it was all confined to one half-ream of Hovey's paper; as soon as we got in a fresh ream of the *same* paper our trouble ceased.

We know of two other photographers who were troubled in the same way, one of them using the same brand of paper, bought of the same house, at the same time. We do not know where the other one got his paper, or when. The toning-room floor was always kept clean, and so was free from hypo.

Hoping you will give us the benefit of your wide experience, and apologizing for giving you so much trouble. Will *Sphinx* help us? J. A. BROCK & Co.

I SEND you a tintype "spotted," taken from my bath, forty grains strong; can you tell me what makes the spots and what the remedy? I have been only a year in the business, but never saw anything like it before. I have exhausted all my ingenuity to discover where they come from, but am still in the dark. I have boiled and reboiled my bath, and the more I boil the worse they are. I boil in an agate iron evaporating-dish. Do you think that is the cause?

I have used different kinds of collodion, and still they appear; they do not appear on negatives. I use the "Centennial" plate, and they appear to be all right. My developer is

Distilled Water, . . .	8 ounces.
Protosulphate of Iron, . . .	$\frac{1}{2}$ ounce.
Acetic Acid, . . .	$\frac{1}{4}$ "

I have consulted old photographers, and they cannot tell me what it is. Now, can you tell me what the matter is, and where the remedy? J. P. GOODRICH.

SULPHATE OF IRON, PURE AND OF MAXIMUM STRENGTH.

BY R. E. WOOD.

As good pictures have been obtained in as short time with the plain iron developer as with any of the *trash* mixtures, then why not have this changeable salt in its best condition all the time, and not resort to the doctoring of it? When combined with ammonia it is weakened and somewhat changed, while other things added to the many different samples of iron sulphate cause different effects every time. Having tried every thing ever known to be added to the developer, I have at last bid good-bye to them all; also to the commercial salt, and make it pure and fresh for myself. If such were always used, there would not be such a diversity of opinion in respect to its use; one giving his experiences after using an old, half-sesquioxided sample; and another after, by accident, having a fresh, good sample. At best it is very carelessly made, and no photographer should ever think of using any but fresh and pure, which can always be done; it is so simple and easy to either make it entire or renew that already on hand.

Here is the process: One gallon of *good* water in the evaporator or other earthen dish, add eighteen fluid ounces *good* sulphuric acid and fourteen ounces *good* iron wire; set it on the stove, and let it simmer till all action ceases, which will take a day or two (depends somewhat on the size of the wire); add more water to replace the amount evaporated; when the acid has become neutralized pour into another vessel, and there should be some iron left in the bottom of the evaporator uncut by the acid; clean all out nicely, pour back the liquid, and add a drachm of sulphuric acid (thus we are sure to have a slight excess of acid), now evaporate to about half the original bulk, two quarts, filter with the lower end of the funnel very near the bottom of the receiving-dish, so as not to expose the material to the air any more than is actually necessary, allow to cool, drain off the remaining liquor, evaporate again for another crop of crystals, dry them in any convenient manner, and put into *glass*-stoppered bottles for use.

If you have any old iron sulphate on hand, dissolve it in twenty ounces of water to each half pound, add two drachms of sulphuric acid and nearly as much wire; heat a few hours until all acid has acted on the sesquioxide and the wire, pour off as before; there should always be an excess of wire; acidify with a few drops of acid, reduce by evaporation, filter, cool, and dry the crystals as before.

This is but little trouble, and you are always sure of having not only the best of its kind, but always that of the same quality, needing no boracic acid or other chemical to enliven it.

WHAT PHOTOGRAPHERS SAY.

AFTER SEVENTEEN YEARS.

A FRIEND who obtained our picture recently, writes as follows: "Your picture looks like a remarkably well-preserved man—one who has but little care and a great deal of prosperity and comfort."

That shows how we are all libeled, sometimes, by modern negative retouching. Our picture was a vignette, and thus the spareness of the figure was hidden.

A YANKEE photographer closes his circular with the following bit of "fly-paper:—"

"*Young Ladies and Gentlemen*: If it is your desire that your photographs should look handsome, commanding, and fascinating, try ———, the acknowledged leading photographer of ———. Numerous happy and desirable matches have been made (in the matrimonial line) through exchanging pictures made by ———."

What next?

OLD PHOTO.

HOW WE CATCH IT SOMETIMES.

A PHOTOGRAPHER—not a subscriber to our magazine, but doubtless a borrower—ventured to send us some execrable examples of his work, with the request that we give him a "good notice" in the *Philadelphia Photographer*—such as he "could have copied in the local papers as coming from high authority, and thus make a good advertisement." Instead, we sent him some kindly criticisms on his work, taking pains to make some suggestions which we thought the following of would help him do better. A

long letter, full of ill-tempered boasting, came back to us, closing as follows:

"If I had not seen so many inferior photographs embellishing the *Philadelphia Photographer* from time to time, and commented upon in such high terms, I would not have troubled you to the extent that I have."

Ahem! So much for trying to help an "erring brother."

PROCESS-MONGING is epidemic again; hence the old proverb comes good, that

"Had the cat wings, no sparrow could live in the air;

Had each his wish, what more would Allah have to spare?"

HOW SOME PHOTOGRAPHERS LIVE.

THE more prosperous of our readers will sympathize with any one who, with all his other tribulations, is tried like unto our honest friend, who writes the following reasons for stopping our magazine. There ought to be some way of correcting such evils. Perhaps this "say" will bring out some suggestions. We have no doubt of the entire reliability of our correspondent.

"I find myself situated in just this way. I am permanently located in a small town, about 5000 population. There is not enough work to keep one man busy at any time. For the last six years I have been here, the average receipt has been about twelve dollars per week. Out of that I must pay all expenses, taxes, repairs, and stock. What is left goes to keep myself, wife, and three children in grub and clothes (say, about one dollar a day—big wages for educated labor); and still, with economy and by working the camera, we have managed to keep out of debt and the poor-house.

"I would be perfectly satisfied, for I love the business, and am not following it for the money in it; but here comes the rub; and if it was not that I have a house that I rent for six dollars per month, I would soon have to go to the wall, and give up the business, like or no like it.

"About one-half of the time I have to run opposition to some one that comes in, and divides what little there is to be done—either a 'Cheap-Jack' car or some travelling photographer, who moves into another gal-

lery that is built here, and that is for rent for the purpose one-half the time, the other half occupied by some travelling (I call them tramps) photographer who comes in; and this is the way they work it (to my sorrow, I say it and know it). They rent the room at any price; pay one month's rent; and if they have a family, rent a house, pay one month to get possession—any price to get in. Then they hurry and issue a circular, inviting all to come, something after this style:

"Come, all ye ladies of this place,
And all ye gentlemen, too;
Walk right into this shebang,
And see what we can do."

"That is all right enough; I have no objection to that. By having their room, they get about one-half the custom. They soon find out that that must pay the expenses; then they cut down prices. But the worst of all (and I am ashamed that there are such men in the profession), they go to anybody, and pay until they get their credit up, and then ask for trust; in fact, get in everybody's debt for groceries, dry goods, etc.; will not pay any rent. It takes about three months to put them out by law; by that time they have swindled the people out of enough money to pack up stores, and move to some other town, and play the same dishonest game over.

"Although I do all I can to caution people about these travelling tramps, it does not amount to much. They think I am interested in keeping them out, and so I am; for I am obliged to stick it out the best I can while they play their little game. I have starved out (or nearly been starved out myself) four sets of this stripe, and now I have another on hand, the worst case of them all, for he has no principle or sense of honor at all. As far back as I can hear of him, he swindled all he got here. He is an out-and-out rascal, and there is no chance of getting clear of him until spring, or until he has played his game, and packs up his traps and leaves, in everybody's debt, as he is sure to do.

"When I sat down, I did not intend to write all this; but I hope it will amuse you, if it does not give you a few new ideas of

how some photographers (tramps) manage it to keep in the business, and out of the poor-house, although the jail is where all such men should be if they got justice.

"Now, you see why I am obliged to stop taking your valuable magazine. When it came to a question of bread and butter or magazine, of course I had to choose the bread and butter; I cannot do without that. But I do not propose to do without the magazine, if I can help it. G. W."

ABOUT THE



EDITOR PHILADELPHIA PHOTOGRAPHER:

A meeting of the Executive Committee was held at the studio of H. Rocher, Esq., on Friday evening, 9th inst., with Mr. A. Hesler in the chair. Committees on reception, decoration, and hanging of pictures being necessary, the following gentlemen were appointed to act:

Committee on Reception.—Messrs. Mosher, Beebe, Gehrig, Robinson, and Hódges.

Committee on Decorations.—Messrs. Smith, Hartley, Ryder, Loveday, and Kraft.

Committee on Hanging Pictures.—Messrs. Platz, Cordingley, Green, Shaw, and Klein.

A vote of thanks was passed for the beautiful certificates of membership just received from the Heliotype Company, of Boston.

The question of eligibility to membership having been brought before the Committee through articles published in all the journals last month, the following resolution was unanimously adopted:

Resolved, That any person actively engaged in the profession of photography, or any employee of such person, shall, on the payment of an initiation fee of two dollars for an employer, or one dollar for an employee, become a member of the Association, with full power to speak or vote on any question that may come before the Association at any of its meetings, and that

any other person may become a member on payment of two dollars initiation fee, with all privileges except voting on any question.

But the Executive Committee consider that this rule shall be binding only until the meeting of the Convention, at which time the whole question will be definitely settled.

Messrs. Gentile and Copelin were appointed a committee to inquire the prices of hotel rates, exhibition rooms, halls, etc., and to report on Tuesday evening, 13th inst., to which date the Committee adjourned.

On Tuesday evening, the 13th inst., the Committee again met, and Messrs. Gentile and Copelin reported that, after considering all the propositions submitted, they had decided that the offer of the managers of the Grand Pacific Hotel was by far the most favorable to the Association.

On motion, the Executive Committee went in a body to the Grand Pacific Hotel, and decided to accept the very generous offer made, which is, to give us their large dining-room for an exhibition-room; a small dining-room adjoining, for the display of articles for sale; the appellate coat-room for the meetings of the Convention; together with the necessary offices, committee-rooms, etc. And, also, they agree to reduce the price of board and lodging to the very low sum of two dollars and fifty cents per day to the photographers attending the meeting.

The Grand Pacific is one of the finest hotels in the country, and the beautiful surroundings will add materially to the enjoyment of our meeting. The dining- or exhibition-room is about eighty feet square, well lighted by day, and at night we can use the electric light, or gas, as may be best suited to our wants. The walls and ceiling are beautifully frescoed, and it is carpeted with a magnificent velvet carpet. The coat-room, or Convention-room, will seat three hundred people; and, altogether, the Committee feel that the Association is to be congratulated on being able to hold its first exhibition and convention under such favorable circumstances.

The Executive Committee again met on Friday evening, the 23d inst., and arranged the programme for the Convention as follows:

Monday, August 23d, Exhibition will open

at 7.30 P.M., followed by a promenade concert or banquet at 9 P.M., at the Grand Pacific Hotel.

Tuesday, Convention will open at 10 A.M. and at 3 P.M., and continue daily until adjourned. On Tuesday evening a lantern exhibition will be given by Professor T. J. Mapes, at which time he will be pleased to exhibit any slides brought by photographers for that purpose.

Wednesday evening, all members of the Association will be invited to one of the theatres.

Thursday, 10 A.M., election of officers for the next year; and in the afternoon an excursion on the lake, or a drive through the boulevards, will be in order.

THE EXHIBITION will be open to the public from 10 A.M. to 10 P.M. each day during the CONVENTION.

During the meetings papers will be read as follows:

"How to Conduct Business," J. Landy, Cincinnati; "The Relations of the Photographer to the Public, and of the Public to the Photographer," Henry Rocher, Chicago; "On Photography," J. Scholeten, St. Louis; "Lights and Shadows of Business," Alexander Hesler, Chicago; "Backgrounds, Illustrated with Charcoal Sketches," L. W. Seavey, New York; "Photography," C. D. Mosher, Chicago; "Photographic Chemistry," Dr. Walter S. Haines, Chicago; "Sanitary Hints," Dr. Norman Briggs.

Dr. H. Vogel, of Germany, will be present to explain his new emulsion process. Mr. John Carbutt, of Philadelphia, D. H. Cross, of Iowa, and H. Howe, of Chicago, will explain the dry-plate process freely to all. And other arrangements are being made which will insure not only a good time, but also a very profitable one. *Come, COME, COME.*

ALEXANDER J. W. COPELIN,
Secretary.

MR. D. BACHRACH, JR., ON THE P. A. OF A.

ALLOW me to say a few words in behalf of the Convention shortly to be held in Chicago. That it will be a success to some extent, is already assured; but it can be made not only a success, but a powerful auxiliary to the fraternity, by obtaining a

united and cordial support. The low terms on which membership can be secured make it imperative for every one to support it as a trial; for, with a solid financial basis, achievements are possible which would satisfy the most exacting disposition.

A large, earnest attendance is also necessary, in order to get the views of the body of the fraternity. But if any one imagines that a mere passive organization to get up an *annual show*, and pay a secretary, is going to satisfy the craft, they will live to see their mistake in its downfall, like its predecessor. The organization, to be successful, must confer *some positive benefits, accomplish some specific objects*, and show itself to be indispensable to the craft. How to do so, is a subject for the careful consideration of every one; and all should attend with some definite notions as to how it is to be accomplished, and give the entire body the benefit thereof.

Without wishing to forestall the action of the Convention, I would like to point to a few things that can be, perhaps ought to be, done. First, dealers should become honorary members; so long as no one of them, or any *clique*, is allowed to *run* the Association in their interests, as seems to have been done before, no objection can be made to their membership. I can see no reason why the editors of journals should be excluded from active membership, if they are prohibited from holding the office of president or secretary.

An official quarterly journal, in small, compact form, merely a review, and containing no original articles, for the exclusive benefit of the members, is an absolute necessity. It should be under the special charge of a committee, to be appointed annually, and one of its prominent features should be the exposure of all secret or worthless processes, swindles, or swindlers, for which the committee shall be held accountable to the fraternity only. It should, in all legitimate enterprises of this kind, be supported solidly by the fraternity, and be able to count on the united financial support of the Association in all legal contests for their benefit. It would be a power that the swindler would fear and the honest inventor respect. It could be made a bulwark against fraud.

I would here mention that, since 1876, at least \$150,000 have been filched from the fraternity through secret processes and worthless patents, without any corresponding benefits, and mainly through the agency of so-called respectable journals, without whom the scoundrels could never have succeeded. Now am I not right in advocating such a journal? It would not interfere with any others, and could be supported by a small annual tax. In fact, the regular journals cannot speak out as they would wish against fraud, for fear of legal difficulty, which such a journal, with the solid Association at its back, need not fear. And then, again, the publication in full of every patent as taken out, would keep us posted on all progress, and enable us to judge of the value of claims made on this score.

I hope all will carefully think over these matters, and give us the benefit of their conclusions. I am going to attend, if possible.

BALTIMORE, July 17th, 1880.

A GOOD WORD FOR CONVENTIONS.

Secretary Copelin sends us the following, which is too good to stay "out of print." May there be many more such.

"I have just received a letter, the following extract from which it might pay you to publish:

... 'It is my intention to be present at the Convention in August. I attended the National Photographic Association meeting when held in Chicago. It was my first convention, and, although I had to borrow the money to take me there, I was well repaid. Now, thank the Lord, the *Philadelphia Photographer*, and the photographers that correspond with it, I don't have to borrow.'

THE VERY LATEST.

I do not know of anything more to say in regard to the Convention. Every thing is working well; and, from the letters, etc., received, I expect that between two and three hundred photographers will be present.

Yours, A. J. W. COPELIN,
CHICAGO, August 4th, 1880, Secretary.

PLEASE read remarks on the Convention in the "Editor's Table," page 260.

SOCIETY GOSSIP.

CHICAGO PHOTOGRAPHIC ASSOCIATION.—The regular monthly meeting was held in their rooms, College of Pharmacy building, on Wednesday evening, July 7th, President Rocher in the chair.

The Secretary is again compelled to refer to the want of punctuality in the members, it being fully half-past eight before the meeting was called to order.

It is also very desirable that a larger attendance should prevail, inasmuch as matters of great importance are constantly occurring, and of a character that every photographer, at least by his presence, should encourage.

Minutes of last meeting read and approved. Mr. William Hirsch and Mr. J. T. Williams were elected members.

There being no papers to submit, the main feature of the evening was taken up. As appears in the minutes of the June meeting, the society voted that each member should, at the next meeting, present at least one specimen of his work for comment and criticism.

The Secretary, in mailing the call for the meeting, drew especial attention to this fact; and it becomes his duty to report that the members as a whole paid no attention to it, there being but four out of our large membership who considered it worth their while to pay any attention whatever to the resolution. This is very far from what it should be. A resolution either means something or it does not; and Mr. Rocher, when commenting on the above facts, stated that when he accepted the office of President he announced that he should, from time to time, call upon the members to present specimens of workmanship, for the purpose of helpful discussion. He further said, that only in this way, of frank, kindly, competent criticism, could there be any genuine progress; too much injudicious and fulsome praise caused the recipient to become overly proud of his achievements, and thoughtless fault-finding discouraged and disheartened.

The Secretary, not being an adept at short-hand, does not wish to be understood as recording anything but the spirit of the remarks offered.

The few prints and negatives were presented, and passed around for inspection.

Upon motion of the Secretary, the prints offered, and those to be contributed in the future, were presented to the society, as the beginning of a society portfolio, which will be open for inspection at the meetings, and which, it is hoped, will grow into a useful and beautiful collection.

Mr. Patterson also presented to the society a complete collection of prints of Mr. North's "apple blossoms" printed-in backgrounds. While some pleasure was evinced at the clever way in which some of the effects were produced, the Chicago photographers did not seem to take kindly to the substitute for regular grounds.

A gelatin negative, given by Mr. Smith, was duly admired for its wonderful elastic properties, he having been able to spread the figure of a slender young girl of twenty into the dimensions and resemblance of a three-hundred-pound widow of forty.

Mr. Clements, of New York, was present, and was introduced to the society. He was here in the interest of the platinotype process, and would call upon the members with the purpose of disposing of studio rights. He had specimens of his beautiful process, which were freely admired.

It is with pleasure that the announcement was received from Mr. Joshua Smith that he would read a paper upon "Development," and all were enjoined to be ready to discuss the subject, at the next meeting. It is hoped that this will be but the beginning of a series of practical articles upon the daily work of the studio that will be of great benefit to the craft.

The latter part of the evening was passed in discussing the coming Convention. A drop or two of acidity was evinced in some of the remarks, but, as the members of the society could only act as individuals in the matter, the subject was dropped. Mr. Rocher announced that all satisfactory and needed information would be forthcoming.

On motion, adjourned.

J. E. BEEBE,
Secretary.

[Proceedings of other societies are at hand, but are unavoidably crowded out.—
ED.]

EXCURSION OF PHOTOGRAPHIC SOCIETY OF PHILADELPHIA.

BY JOHN C. BROWNE.

A MEETING of the excursion party was held in Philadelphia, July 15th, 1880, for the purpose of examining the results of the dry plates exposed during the trip over the Morris Canal in June. Mr. S. Fisher Corlies occupied the chair. After the Secretary, Dr. Seiler, had read his report of the excursion, which was admirably illustrated by Mr. Thomas B. Craig, the members present were asked to show their prints.

Mr. Barrington offered some good pictures from 7x9 negatives, but, owing to business engagements, he regretted that he had been unable to develop or print from all of his negatives, but he expected to be able to obtain a print from each plate carried into the field. He had used Partridge's emulsion, albumenizing his glass before coating.

Mr. Corlies made a good report. Many of his emulsion plates were successful, a group of fish being particularly fine. Almost all of his gelatin plates were over-exposed, but valuable results were obtained from some of them. Mr. Corlies used $6\frac{1}{2} \times 8\frac{1}{2}$ glass, edged with rubber and benzole before coating.

Mr. Pancoast presented twenty-three out of twenty-eight dry plates exposed, all of Partridge's emulsion. In this collection of work, although many were nice pictures, and showed careful arrangement, the presence of insensitive marks was quite frequent. These plates were prepared over three months before using, and, to prevent the possibility of double exposure, had been numbered on the back with opaque, and edged with rubber and benzole to obviate slipping. Mr. Pancoast is of the opinion that his system of marking caused the insensitive spots.

Mr. Sartain lost many gelatin plates from under-exposure, the plates that Mr. Carbutt had furnished him not being as rapid as those carried by others of the party. Although Mr. Sartain was aware of this, he was led to give rather too short time, and thereby failed to get satisfactory results. Some emulsion plates were good.

Dr. Seiler showed twenty-three prints, and reported a portion of his plates still un-

developed. Some of this work was excellent, but quantities of spots spoiled many of the prints. No substratum of albumen or rubber was used, each plate having been rubbed with powdered talc before coating.

Mr. Browne produced a print for each exposure, but many of the pictures were far from perfect. He described one very serious difficulty that had given no end of trouble. Finding it difficult to obtain thin glass for a very small outfit, $3\frac{1}{4} \times 3\frac{1}{4}$, he had purchased some German mirror-glass, which appeared to be just suited for the purpose. The prepared surface was easily removed, and the glass washed, soaked for a week in nitric acid, then thoroughly washed, dried, and carefully cleaned with alcohol, then edged with rubber solution. Thinking that all trace of the preparation of mercury had been removed, the plates were then coated with Partridge's washed emulsion; but, upon development, all of this glass gave most unmistakable signs of not being clean; in some cases forming blisters that must soon destroy the unfortunate negative.

Mr. Bates reported a leaky camera-box, that spoiled much of his work. Fortunately having two boxes, he was enabled to obtain some satisfactory remembrances of the trip with the smaller one.

Mr. McCollin reported some good gelatin results, but he had been unable to develop his other emulsion plates. To Mr. McCollin belongs the honor of making the best picture of the two mules, "Tom" and "Baby." It was made on a gelatin plate; Steinheil lens; five seconds exposure; f 36.

Mr. Craig was unable to be present, but reported some good results with gelatin plates. He suffered from the effects of over-exposure.

In giving the above short and perhaps unsatisfactory report of the results of this photographic excursion, the writer has aimed to faithfully describe some of the defects that pursue dry-plate workers in the field. It will be plainly seen that all the results were not perfect, as most perplexing faults pursued many of the party; but among the work offered for examination was a great deal that would be recognized not only as good specimens of photography, but show-

ing a thoughtful consideration in the selection of the subject.

Mention is frequently made of gelatin plates. In all cases they were prepared by Mr. John Carbutt, of Philadelphia, and often developed by him.

With many of the members of the party it was their first experience with rapid gelatin plates, and from the commencement of the trip to the end it was entirely a matter of doubt what time to give them.

It may be asked, What was the feeling of the excursion party in reference to gelatin dry plates? Although a great many of these plates were lost from various causes, the feeling was strong in their favor, and I feel satisfied that, upon another out-door meeting, gelatin will be more largely represented.

One of the party, an artist of excellent reputation, was so delighted with the working of rapid gelatin plates, that he carried with him upon his summer trip a large number of these plates, feeling that the results, although, perhaps, not perfect, will be of great value to him in his profession, by enabling him to secure studies of life which it would be impossible for him to obtain by any other process.

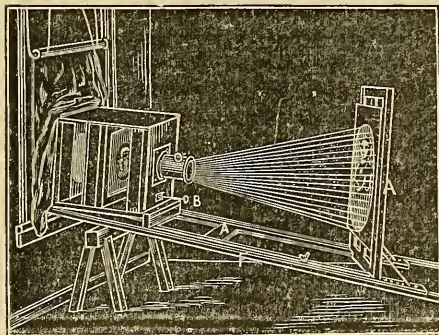
"COLLODION TRANSFERS" AND HOW TO MAKE THEM.

BY J. H. FOLSOM.

THESE "collodion transfers" are easy to make, and, *if nicely painted*, are quite attractive. To make the enlargement, no extra expense need be necessary, as any one-fourth or one-half portrait lens will do, and a ten-cent soap-box can soon be turned into a camera. A long-focus lens is, perhaps, the best for full-length figures; and you can have an expensive box if you like, but it will not turn out any better work. The principle is just the same as a reflecting solar-camera without the reflector or condenser; but, as very many good operators have never seen the working of a solar-camera, I send drawings which I hope will explain.

The box should be about fifteen inches square and eighteen inches long. F is a board fifteen inches wide and five feet long,

to which the box is fastened; A is the easel, which slides on the board, to or from the



lens, according to the size you want to enlarge; B is a rod of wood, or iron is better, which is fastened to the carrier inside the box, into which you slide your negative.

You focus (after your easel is far enough away to give the size you want) by moving the negative-rack by means of the rod B to or from the lens inside, until your image is sharp on a glass covered with white paper, placed on a ledge on the easel; remove this glass, and place your sensitized plate in the same place, and time about one minute, or according to the density of your negative; of course, there must be no white light in the room.

Any bath and collodion that works clear in the shadows will do; the collodion should be old, and the bath quite acid; the bath must be as weak as it will work with the collodion—we get the best results at about twenty-five grains. The developer must be pyro; a good one is as follows:

Water,	1 ounce.
Pyrogallie Acid,	5 grains.
Citric Acid,	3 “
Acetic Acid,	$\frac{1}{2}$ drachm.

Alcohol, if necessary to make flow smooth.

The positive should be timed so as to develop quite slowly; do not develop too far, or the whites will not be clear; it is not *necessary* to wash after developing; place in hypo and let it fix; but I wash a little, so as to keep in the habit, as, in using the iron developer, they must be washed; after fixing, they must be *well* washed, but be careful, or the film will loosen, the plate *not being albumenized*.

To prepare the plate, polish with alcohol and water, then rub with a solution of wax, five grains; benzole, one ounce; this is necessary to enable you to strip the film off after it is dry. There are several substances good for the purpose, as any one who has made the “glacé” pictures will know; we succeed with this, though they sometimes *stick* in hot weather.

After your transparency is fixed and well washed, your gelatinized paper (which, in the meantime, has been soaking in cold water a few minutes,) is laid carefully on the collodion film, the water and air are squeezed out with a squeegee, not pressing too hard, the surplus edge of paper is cut off, and the whole left to dry, when, by cutting along the edge, a thin knife may be inserted under the corner, and the film stripped from the glass.

To gelatinize the paper, dissolve by heat two ounces of gelatin to a quart of water; keep hot, and float the paper about three minutes, and hang up to dry, when it is ready for use.

Heavy Saxe plain paper will do, but there is a cheaper paper which is as good, or better, for this purpose, which you can get at any paper warehouse; the paper must be gelatinized in cold weather or in the evening, or it will run; a large quantity can be prepared, as it will keep.

This is, no doubt, the exact way the so-called “Megatypes” are made, only by the “Co.” keeping these every-day chemicals *secret* you think they have discovered something wonderful; of course, I don’t know, as I didn’t bite at it as I did at “lightning;” but, anyway, this is as simple, and the results just as good. “Transfers” can be made by it, which is all that is necessary; and I don’t see that anything in it is patentable. If they could be made of a warm tone and with clear shadows, they would be as nice as plain pictures; but all the *great variety* of tones I saw at the place of the Megatype Company were a cold, disagreeable-blue, and a tone about the color of a “yaller” cat.

I use two cameras made as above, and any of my portrait lenses will work just as good as the company’s. I have all my transfers painted in oil, but artists who are unac-

customed to working on collodion surface are slow, and consequently more costly. Have been trying to get an artist used to the work, and have at last succeeded. Where the transfer is *good*, the painting is so simple that any photographer of taste can do it, and an artist can afford to do them for you for one dollar each, and make money. This I might explain, but I learned it in confidence, and it might conflict with the interests of a good firm, for whom the artist formerly painted.

I have recently engaged an operator who worked for years at "transfers," for a large house in London; he says they are quite common there. His process is similar, but more complicated than the above, which I have worked for two years.

Perhaps some of your readers can explain a way to tone the transparency.

The above process is no theory; we are making them every day the same way, and anything I have not made clear I will gladly explain, so no one need be bamboozled.

DANBURY, CONN.

ANOTHER PROCESS-MONGER — WHAT HE OFFERS FOR \$3.

REGARDLESS of the fact that Chicago is getting ready for the Convention, Professor Park has recently been there with his "formula." "He asks three dollars, but will take seventy-five cents," we are told. We have been favored by the friend of the photographers in Chicago with the whole story, which we give below, as follows:

PROF. PARK'S CELEBRATED FORMULA.

"Alcohol and Ether, . . .	Equal parts.
Climax Cotton, . . .	6 grs. to oz.
Iodide of Ammonium, . . .	2½ grains.
Iodide of Cadmium, . . .	3½ "
Bromide of Cadmium, . . .	2 "

"In reference to this collodion, we will say, most emphatically, that its equal in portrait work has never been found.

Quick Developer Stock.

"Water,	1 quart.
Sulphate of Iron, . . .	10 ounces.
Granulated Sugar, . . .	10 "
Sulphate of Copper, . . .	2 "

"Take from stock three ounces to ten ounces of water; acetic acid, two ounces.

Silver Bath for Paper.

"Water,	1 ounce.
Nitrate of silver, . . .	45 grains.
Nitrate of Ammonia, . .	20 "
Nitrate of Lead,	5 "

"Enough aqua ammonia to make the bath slightly alkaline. Silver 30 seconds; fume 10 minutes.

Toning Bath.

"Water,	34 fl. ozs.
Gold,	15 grains.
Water,	17 fl. ozs.
Acetate of Soda,	231 grains.

"Mix the two solutions, then add four drops of a saturated solution of sulphate of copper, let stand twenty-four hours.

"These formulæ are just as represented, and always reliable.

"H. S. PARK,

"Professor of Chemistry, Worcester, Mass."

THE "ARTOGRAPH" PATENT.

As many inquiries have come to us on this subject, we give below part of the specifications of the patent granted June 1st, 1880 (No. 228,380), to William D. Osborne, of Philadelphia, Pennsylvania, assignor of one-half of his right to Albert B. Sloanaker, of the same place, for a process of producing, embellishing, and retouching photo-negatives, as follows:

"To all whom it may concern: My discovery and invention consist of a process for making a photo-negative or improving and embellishing some other such negative from which photographs are taken in any of the usual methods. The negative may be formed on the usual plate-glass or other transparent material used for that purpose.

"In carrying my process into effect I take a photographic negative plate and smoke it over a gas-burner or lamp until it has formed a sufficient deposit of soot to enable me to draw thereon. I then sketch the design in negative form upon the prepared surface with a brush or eraser, after which I again smoke it and work up the design which I have sketched, and so repeat the smoking and working until I have the strength and contrast I desire. To preserve permanently the design thus drawn on the photo-negative, the surface is coated with a gum-varnish made from gum dissolved in benzine or tur-

pentine. The negative is then complete and ready for printing from in the usual manner of photographic printing.

"By this means I can improve and embellish any photographic negative taken in the usual manner; and, further, with brushes and erasers I can correct any imperfection, improve the lights and shades, and make any addition or alteration that I may desire, such as draw hair on the head, sharpen the features, tone down any objectionable lights, all of which can be done in such a manner as to harmonize thoroughly with the rest of the image. It is then varnished and ready for printing.

"It is preferable that the original negative be taken on a medium-tint plain ground when a scenic background is to be added.

"The deposit from the smoke of gas or naphtha, being more free from oily, gummy, and other adhesive substance, is the best adapted to the purpose.

"I do not claim a plain smoked glass to receive tracings, broadly; but

"What I do claim as new, and desire to secure by letters-patent, is—

"1. As an improvement in the art of photography, the method described of softening or toning down negatives, and at the same time adapting them for retouching to cure original defects of the subject, or making changes in form, figure, or attitude of the same, and also for the artistic production of scenic effects, and which consists, essentially, in depositing on the surface of the plate, by means of smoke generated from the burning of gas, naphtha, kerosene, or other of the hydrocarbons, a coating of soot, lamp-black, or other suitable carbonaceous deposit, substantially as and for purpose hereinbefore specified.

"2. A photographic negative having the ordinary silver or other picture upon it, and provided further with smoke-deposit of variable thickness to retard or otherwise regulate the transmission of light through it, and having furthermore delineated upon its smoked surface an artistic design in the way of background protected by a transparent preservative coating, substantially as described.

"WILLIAM DIXON OSBORNE."

Any one can judge from reading the above

whether he is "artist" enough to make this means of service to him. We have seen some wild efforts at it.

NOTES AND PRACTICAL SUGGESTIONS.

BY A. M. DE SILVA.

(Continued from page 177.)

IN my last "Notes" (page 177, fifth line from top of column), a typographical error occurs, which reads, "The tint in the albumen of No. 4 *presented* a just comparison of the tone of the prints," and which should have read *prevented*, etc. By running your pencil through the "s," and writing "v" on the margin of the page, you will have it right.

There is, perhaps, no department of photography which occasions more annoyance and entails more loss than the printing department. There is no part of the establishment, as a rule, upon which money is so begrudgingly expended. It is an ill-conveniened, dirty, and uncomfortable hole; and yet the money *freely* laid out on a swell chair or two, or a lounge, for the reception-room, would frequently do wonders toward making the printer's den not only more comfortable to work in, but enable him to turn out better and more work. It is astonishing how tenaciously the idea sticks to the profession that "anybody" can print, and that so long as there is room to hang out a board on which to lay the printing-frames, the place is "good enough to print in;" and, judging from the half-starved looking prints which are scattered broadcast, it would seem that it has been forgotten that decent and permanent prints cannot be made unless a proper amount of silver has been used in their production. It is these measly weaklings which are the first to fade.

It is into these holes that boys who go "to learn the business" are placed, and soon made useful, and kept there, plodding along as best they can with the shortcomings of the place and the material and the appliances necessary to the production of even a respectable print; with few exceptions, knowing little or nothing of printing as it

should be, even after years of drudgery (for it is nothing else, if followed in this fashion).

I admire the plucky manner in which Mr. Hearn starts out in his *Practical Printer*. He shows at once that he knows what he is about. "For good success at printing, it is necessary that the printing-room should be *convenient to work in*, and *well supplied with those materials, etc., which are necessary for fine work*." And then he tells you to think and compare the work of others, and goes on to describe a very convenient work-room.

While we cannot all enjoy the luxury of a perfect printing-room, there is certainly no excuse for forgetting all about it. He *does not* tell you, however, that if you do not know how to print properly, that, through this misfortune, you spoil twenty sheets of paper, you have lost the price of a manual which will give you information to steer clear of mishaps which would soon cost the price of a decent photographic library. But it is so, nevertheless.

In a practical and easily understood and interesting manner, he goes on to give you reliable information sought for far and near, on every kind and style of silver print, concluding with a chapter on "Glacé Photographs," the learning of which I have known, yes, within a decade, photographers to pay the "low charge" of one hundred dollars for, binding themselves under severe penalties not to *reveal the secret* that they do not read.

A disease cannot be cured so long as the remedy is unknown, and the only way to find it out is to study it up.

Try this remedy, and you will soon see how your printer will come (maybe from the den under the roof where his brains are being baked by the heat, and he is being made consumptive by the dust) for a new broom and a mop, to make things clean and tidy, and a wip bit more silver, just "because the prints do not look like those in the book," and he has begun to find out the reason; and an extraordinary (for him) dose of hypo, which he will have learned should be used fresh every day; and some more salt, to replace the dirty mess which has been in use "time out of mind," "because, I am told, it makes the prints yellow."

And, although the printing-rooms happen to be not as dark as the picture I have drawn, no one could fail to be benefited by perusing this text-book of Mr. Hearn's, or similar works; and when the employee is benefited, the employer receives it with compound interest added.

If negatives from which solar prints are required be too dense, they may be easily reduced by first taking off the varnish with alcohol, and, after washing, treating them with a very weak solution of perchloride of iron in water. The action is greatest on the denser portions of the negative. This will be found most useful on negatives where white drapery has become too dense or filled up during development.

In a few days, the hot weather will be upon us; and I would again remind the landscape photographer of the happiness which the addition of about two drops of *glacial acetic acid* to the ounce of *collodion*, for the day's use, will give him, by placing the development under control.

(To be continued.)

GERMAN CORRESPONDENCE.

American Photographers in Berlin—Photography at Technical High-Schools—Light-proof Rose Albumen Paper—The Turning Yellow of the Paper in the Light—Photographic Exhibitions.

HERE we are in summer again. The number of customers in the reception-rooms dwindles down at just as fast a rate as the intensity of the light, and, alas! also of the heat, increases. Everybody is rushing to the seaside or the mountains, and the photographer follows the crowd—less in the expectation of picking up business, than in order to take a most-needed rest himself. Nobody seems inclined to have an eye to business just now, except the so-called "American" photographers. These itinerant artists stroll from place to place, like the gentlemen of the circus and the wandering menagerie, and extol to the verdant countrymen the wonders of their alleged new "lightning photography." They do not work at all with gelatin plates, but make ferrotypes; and the wonder of the nineteenth century is, how they can always find people yet who

see anything nice in their cheap and nasty productions.

Of more importance than the success of these side-show photographers, is a further step in advance of scientific photography, in acquiring another seat at the Technical High-School at Vienna, which is now the second chair of photography established at a German high-school, and Dr. Eder, the well-known indefatigable photo-chemist, has been called to it. It would have been impossible to make a better choice. It has to be seen yet whether other technical high-schools follow this laudable example; thus far, with the exception of Berlin, there is only at the Polytechnic School at Dresden reserved a modest little place for scientific photography.

In the meantime, here in Berlin, a really palatial building is in course of construction, on a beautiful site in the western part of the city, and there suitable and ample place will be reserved for photography. Half of the top floor of the southerly front of the building has been reserved for photography; there is a large gallery, thirty feet long and twenty feet deep; four large dark-rooms, a laboratory for the production of photographic chemicals, spaces for *lichtdruck*, heliography, etc., an electric light machine, in one word, everything will be supplied in order to keep fully abreast with the onward march of the science. It will take three years yet to finish the structure, but when it is completed, Berlin will offer another great attraction to photographers.

Among other photographic novelties, I have to report to you a slight improvement on the positive process. As you are aware, rose-colored albumen paper is so much preferred for portraits of late, that almost no white albumen paper is used any more in the portraiture branch, if it is not for pictures which are to be colored. Unfortunately, the rose color of the albumen paper used until now has been so transitory that, with twenty-four hours' exposure to the light of the sun, it faded, and left an ugly gray color; but now, Messrs. Trapp & Münch, the well-known manufacturers of albumen paper, place a rose-colored paper in the market which is genuine. I have exposed their paper, half covered, to the sun

for six days, without finding the least trace of fading.

It is a deplorable fact, that in practice not only the paper fading in the light, but also papers coloring in the light, play a great part. That most of the paper the newspapers are printed upon turns yellow in the light, is well known, and it seems that this defect is much more noticeable of late than formerly. I have noticed it in a bound book which I left open on the window-sill for a day in the sun; but it happens, too, in photographic cartoons, which not unfrequently turn yellow in the light much faster than the photographs mounted on them. Loescher & Petsch, here, showed me a cartoon on which the photograph of a white statue upon deep black ground was mounted, and which had hung half a year in their show-window. The cartoon had turned yellow all around, but the photograph had remained white. Of course, the turning yellow may be partly occasioned by dust, which adheres easier to the rough surface of the cartoon than to the smooth surface of the photograph; but when the latter was detached from the cartoon by the application of tepid water, a distinct, yellowish copy of the picture of the white statue was observable upon the cartoon; and, in this case surely, the effect of dust was clearly out of the question. The light had penetrated the light parts of the picture, and colored yellow the parts of the cartoon lying under them.

The reason of the peculiar inclination of the paper to turn yellow is to be found in the rosin contained in it, which originally comes from the different kinds of wood the papers are made of. It also occurs that papers are glued with rosin soap. In the face of the above facts, it would be very well to eliminate every particle of rosin from the wood-pulp before making the paper, as thereby a perfect light-proof-paper could be obtained.

Once more two exhibitions are in course of preparation—the grand photographic exhibition in Ghent in honor of the great Belgian jubilee, and the annual exhibition of the Photographic Society of Great Britain. I do not take into account the International Exhibition at Melbourne, at which our pho-

tographers will be scarcely represented. It seems that exhibitions are steadily on the increase, and I would suggest to the brethren of the craft who thirst after medals, to get a special exhibition frame made of iron, capable of withstanding the wear and tear of travelling, and which could be similar to the "travelling portfolios" of our societies always on the road. One could direct this iron-clad frame from one exhibition to the other, it being then sufficient to send, from time to time, pictures to replace the old ones to the exhibition commissioners.

Very truly yours,
DR. H. VOGEL.

BERLIN, June 29th, 1880.

FRENCH CORRESPONDENCE.

Gelatino-Bromide Silver Process with Methylic Alcohol—Application of the New Woodbury Process to Direct Printing from Positives—A Communication from Mr. Janssen to the Academy of Sciences, upon the Effects of the Reversing of Photographic Images by the Prolongation of the Luminous Action—Experiments in the Development in Daylight of Impressions on Sensitized Gelatino-Bromide Films—Prizes Awarded to Photography by the National Society for the Encouragement of National Industries—Seventh Edition of a General Treatise on Photography, by Dr. Von Monckhoven.

THE question of the silver gelatino-bromide negative process is becoming every day more important; new formulæ are continually being presented; every one seeks to do better and quicker than his neighbor; no sooner is a method published than another one appears which seems to be better. It will require some months for the settling to take place of all these experiments, or rather of their results, so that the quintessence of these discoveries may come to the top. As a faithful chronicler we will confine ourselves to point out the progress that has been reached, but forming no conclusions, in the fear of seeing, to-morrow, demolished the edifice that we had enlogized the day before. It is at this time a rapid torrent, that carries us with it, and which we are

obliged to follow. Nevertheless, there are among our colleagues two devoted advocates of collodion, who show themselves rebellious, as far as lies in their power, to the use of gelatino-bromide. In their eyes this process is open to numerous objections, and especially in its too great rapidity; a singular reason, indeed, to be urged against a negative process! In our opinion, it is the only one that should not be invoked. Too rapid! whilst for a number of years the efforts of all seekers have been turned towards the obtaining of the greatest possible amount of sensitiveness, and that opticians strive to improve their lenses by making them more luminous! We are now told that excessive sensitiveness is a fault, and collodion emulsion is cried up because, among its other qualities, it possesses that of being slower. At the present time a medal has been bestowed upon one of our honorable colleagues for his investigations relating to collodion emulsion; whilst nothing is done for those who, far from going against the current, follow it, or outstrip it. This retro-activity does not surprise us, but it deserves mention. This being said, now let us come to a fact: an emulsion of bromide of silver in a solution of gelatin which is alcoholic rather than watery, possessing the advantages of being easy to keep and of much more rapid desiccation than an emulsion in a solution which is only water.

In a litre (1 quart) of water dissolve 30 grammes (8 drachms) of bromide of ammonium, and add a solution of 45 grammes (11 drachms) of nitrate of silver in a half litre (1 pint) of distilled water. The bromide of silver is washed for several hours in several waters, so as to remove the nitrate of ammonia and the bromide of ammonium in excess; now add enough pure water to form in volume 500 to 600 grammes (16 to 19 ounces) containing 5 grammes (77 grains) of ammonia, and 30 grammes (8 drachms) of neutral gelatin. The whole is placed over a water-bath at a temperature of about 35° Centigrade (96° Fahr.) for six hours, then are added to the emulsion thus formed 50 to 100 grammes (13 to 26 drachms) per cent. of its volume of methylic alcohol; the result is an imputrescible emulsion, highly sensitive, and always ready for use.

This formula, which is recommended by Mr. Stork, appears to us to be very good, and especially of advantageous application in warm countries, where fermentation soon spoils watery solutions of gelatin.

Whilst describing recently the new process of Mr. Woodbury for making photoglyptic prints without being obliged, in making the printing moulds, to use a hydraulic press, we did not refer to the facility afforded in using this new process for making prints with gelatinous ink immediately from the mould formed by the tin-foil applied to the cylinder against a gelatin relief adhering to a plate. It is only necessary to substitute a positive for a negative for the impression of the bichromatized gelatin. The result is a negative in gelatin, with depressions more or less marked, according as they correspond to those portions of the positive which are more or less translucent. A sheet of tin-foil is then pressed in a cylinder press against the negative, in which the blacks are in relief and the whites in *intaglio*. When the moulding is completed, this plate may be pressed on the photoglyptic press and printed from, without being obliged, as in the contrary case, to coat with copper the back of the foil, and to then transfer the mould from one plate to another, so as to get uppermost the side of the moulding which primitively adhered to the gelatin. There are many cases in which this possible substitution of a positive for a negative may come into use, and this is why we should carry to the credit of the new invention of Mr. Woodbury this still more direct means of making photoglyptic work, when, instead of a negative, a positive cliché is used.

Mr. Woodbury, who is now on a visit to Paris, has shown us some very successful prints of the size of 27x33 centimetres (11x13 inches), which he has obtained in the same manner as the cabinet pictures which he has recently shown; that is to say, without the hydraulic press, and in using a simple cylinder press for polishing prints. It does not appear to us to be more difficult to obtain prints of a still greater size, and we believe that 30 x 40 centimetres (12 x 16 inches) may easily be reached, a size which requires, when the hydraulic press is used, a pressure of about a million pounds.

Mr. J. Janssen, member of the Institute, has just made to the Academy of Sciences a very interesting communication upon the effects of reversing photographic images by the prolongation of the luminous action; that is to say, that photographic images may become inverted, and pass from the negative to the positive by the prolonged action of the light which has produced them. Mr. Janssen has obtained in this manner positive solar prints, and with a sharpness equal to that of a negative, but after an exposure in a camera from one-half to one second; that is to say, during an interval from ten to twenty thousand times longer than that of $\frac{1}{1000}$ of a second, which is required to obtain a negative of photospheric granulations of the sun. This very short time of $\frac{1}{1000}$ th of a second, may be considerably reduced, and may fall to $\frac{1}{2000}$ th of a second, and even less if photographic plates prepared with gelatino-bromide of silver are used. During the first period of exposure a first image is formed, and this is negative; the luminous action continuing, this image still remains a negative, but losing sharpness and vigor; then a moment is reached in which the negative image entirely disappears, and in which the plate passes through a neutral condition; that is to say, in which no appreciable image appears by the action of the developer. But under the continued action of the light a new phase presents itself, and an inverse phenomenon is produced. The negative image of the first period of action yields place to a positive image, in which the distribution of the lights and shadows is exactly inverted; and this image, if the time of luminous action has been well regulated, possesses all the detail and all the sharpness of the one whose place it has taken. Then, if this period is exceeded, and the light allowed to continue its action, a second neutral condition is produced, also the reverse of the first, inasmuch as if this last showed the image uniformly dark, the second state gives it uniformly light, the developer giving no longer any metallic deposits. With an exposure of from one to three hours, Mr. Janssen has been able to obtain, as positive prints, views in which the landscape shows itself by transparency as it is seen in nature; he has also

made counter-types, which are of the same character as the originals; that is to say, positive, if the type was positive; negative, if the type was negative. In these photographs it is the same rays of the spectrum which have produced, first, the negative image and its transformation into a positive image. These facts appear to us big with future results in favor of new applications to photography, and we are happy to give them in all their freshness to the readers of the *Philadelphia Photographer*.

We have read in some English journals that a gelatino-bromide plate impressed in the camera, or by contact, and then applied for a certain time upon another plate, sensitized but not impressed, transmitted to it a portion of the received luminous action. Two negatives were thus obtained instead of one. Our experiments in this direction have led us to no result, to no appearance of the transmitted image, however weak. But where we have met with more success is in the development in daylight of gelatino-bromide sensitized plates.

The color of the oxalate of iron and of old pyrogallie acid is precisely that of the ruby, and it preserves so well the films of gelatino-bromide from the action of light that I have been able to put a plate first impressed in obscurity into a bath of oxalate of iron. The thickness of the liquid should be about a centimetre (three-eighths of an inch). The dish containing this plate is then carried to the full light, the image appears perfectly defined, and, finally, the visible effect having reached the state deemed sufficient, the plate, taken from the iron bath, and immediately washed, gave a negative as clear and as free from fog as if it had been developed in total darkness. It is easy to conceive that this will render much more convenient, whilst on excursions, the use of a sensitizing process like the one that engages our attention. For this it will suffice to contrive a means of immersing the plates in the developer before their exposure to the light, after which the operations may be done in full light, which is much more convenient than to bury one's self alive in a sort of prison, or in darkness, as if we had committed a crime, or was meditating one.

It will be interesting for our colleagues

of the new world to know what encouragements are offered by our societies to scientists and investigators, through whom progress is made in the photographic art. Our Society for the Encouragement of National Industry has just bestowed on Mr. Poitevin, for his inventions, the prize of 12,000 francs; to Mr. C. Petit, for his process of simile engraving, which we have spoken of in one of our letters, a prize of 1500 francs; to Mr. Chardon, for his collodion emulsion, a platinum medal; and to Mr. Pellet, for his cyanofor paper, giving blue lines on a white ground, a silver medal. In consideration of the important industrial applications of the principles rendered practical by Mr. Poitevin, and of the little profit that he has derived therefrom, this prize of 12,000 francs is very justly conferred. Notwithstanding human ingratitude, which often recognizes services that have been rendered only after the death of their author, Poitevin, during his lifetime, has been fortunate enough to see the practical success of his discoveries, and to receive from his fellow-citizens serious and palpable proofs of their gratitude. Do not forget that Poitevin has already received the prize of the Duke of Luynes, of 10,000 francs, that known by the name of the Tremont prize of the same amount, and that he now receives 12,000 francs, without counting the large medals and decorations in addition to these sums in money.

The seventh edition of the general treatise of Dr. Von Monckhoven has just appeared at the publishing house of G. Masson, at Paris. This new edition contains chapters that are entirely new, one especially on silver gelatino-bromide emulsions. No greater praise can be said of this treatise of Dr. Von Monckhoven than the numerous copies that have already been sold; this last edition included, the number will reach 21,000.

LEON VIDAL.

PARIS, July 1st, 1880.

CORRECTION.—In our June issue, page 210, in an article by D. FILSON & SON, we make these gentlemen recommend a collodion manufactured by Mr. J. H. RINK. The gentleman's name is Mr. J. H. KIRK. As a stock-dealer and manufacturer Mr. KIRK is no doubt so well known that the misprint has caused no harm; however, it is but just for us to make the correction.

WRINKLES AND DODGES.

A "FRIEND of Weymouth's Vignette papers" suggests that they "would be better if printed on oiled tissue paper." Very true; but lithographs *cannot* be printed upon any oiled surface. If you want to toughen your vignettters, thin negative varnish answers very well to coat them with.

THE Robinson Trimmer should always be used upon glass; not upon tin or iron, because the metal shavings get into the prints and cause metallic spots; nor upon wood, for the surface is not hard enough to pinch out the print against the steel wheel.

I AM much pleased and benefited and encouraged by the *Philadelphia Photog-*

rapher. We are getting pretty well acquainted, and on very good terms. Times will be better next year in Texas, I believe, for crops in this section were never better, of every kind.

If you think it worth it, tell your subscribers, if they want to make weak, flat negatives print good, to collodionize the back of the negative, and *dry*; then "model up" with dry ferrotype colors, or, if need be, smoke a glass over a coal-oil lamp, and use it, the smoke, with a sable pencil. I have "doctored" negatives from old weak gems in this way, and delighted the "customer" with the results; it is simple.

J. F. CAYTON,
Reagan, Texas.

Editor's Table.

PICTURES RECEIVED. — From Mr. ANDREW PRICE, Geyser Springs, Cal., a very fine set of stereoscopic views of the most interesting points in that famous section. The negatives were made at all hours, from 6 A.M. to 5½ P.M., and as a result show manifold effects of light and shade which are brought out in full in the excellent negatives and prints. Mr. W. J. BAKER, Buffalo, N. Y., sends cabinet portraits of Gen. J. A. GARFIELD, the Republican candidate. The pictures show three views of the subject, and are no doubt as fine likenesses as they are photographs. From Mr. J. F. RYDER, Cleveland, Ohio, a large lithograph of Gen. GARFIELD, showing him as a youth, soldier, and statesman; on the left side, in the background, is the log cabin, from which he started, and on the right the White House, toward which he is aspiring. From T. P. MARYATT, Elgin, Ill., several specimens of card and cabinet portraits. The pictures are nearly all bust-vignette. A comic card picture, illustrating the trials of both operator and subject, from Mr. S. S. HULL, operator with Mr. F. W. KERSTING, Galveston, Texas; also, two fine, clear cabinet portraits. Messrs. ELMER & TENNEY, Winona, Minn., send some stereoscopic views of "High Water at Winona, 1880," showing gardens, streets, and fields submerged in one broad lake. In one view he shows us a farmer going out in a row-boat to feed his poultry. From Messrs. HARROUN & BIERSTADT a 15 x 20 Artotype portrait of Gen. HANCOCK, the Democratic candidate for the Presidency. It seems

to be an excellent likeness, and no doubt will have a popular run for campaign purposes. The price of this picture is only 50 cents per copy; a liberal discount is offered to the trade. Mr. C. A. STACEY, Lockport, N. Y., sends us samples of his everyday work, varying from minette to cabinet size, including a few stereos. Mr. STACEY has been in business but ten months, and is only 23 years of age. His work is admirable, and might well bring a blush to the cheek of some photographers who "have been at the business for twenty years." From Mr. JOHNSON, Cazenovia, N. Y., a number of cabinet pictures. One of the subjects, a little girl, is in full winter dress, snow-shoes and all, and grasping a stout staff, appears about to set out on an Arctic expedition. Mr. L. R. EVANS, Scranton, Pa., sends us samples of his most excellent work. Among all our rising young photographers, we know of not one more zealous in his work, more determined to succeed, and therefore more likely to succeed, than Mr. EVANS. The samples now before us show the taste, skill, and ability of the good photographer. The pictures are clear, sharp, soft, beautifully finished, and well printed.

THE *Times*, Savannah, Ga., devotes a whole column of its July 24th issue to describing the rooms and work of Mr. O. PIERRE HAVENS, the veteran photographer of that city.

THE latest growl of the "Green-eyed monster" announces Mr. SINGHI, of Binghamton, N. Y.,

to be a *Chinaman*. We can assure our readers that there is no truth in the report. We have long known the gentleman personally, and our word may be taken positively when we declare that Mr. SINGHI is *not* a Chinaman.

WE have received a neat catalogue of stereoscopic and other views, published and for sale by D. J. RYAN, stereoscopic, photographic, and ferrotype stock depot, Savannah, Ga. The list contains several hundred views of Savannah and Florida.

OUR good friend, Mr. S. R. STODDARD, Glens Falls, N. Y., has issued a neat, colored map of the *Adirondack Wilderness*, a sample copy of which now lies before us. Mr. STODDARD, our readers all know, is not only an eminent photographer, but also a well-known writer, one of whose dearest subjects is life in the wilderness. His graphic descriptions have done much to draw tourists to the Adirondacks, and this map is especially designed for the use of such.

MESSRS. CHAS. COOPER & Co., New York, N. Y., send us their July price list of photographic chemicals and other preparations.

FROM MESSRS. DOUGLASS, THOMPSON & Co., Chicago, Ills., their June issue of "Photographer's Bureau of Information;" also, revised price list of frames, and many other articles in their line. Go see them when in Chicago.

THE ELECTRIC RETOUCHER. — Although the advertisement of the Electric Retoucher, manufactured by WHITE & SNYDER, has been withdrawn from our pages, we are still constrained to call our readers' attention to this most excellent invention. It is, no doubt, a great time-saver, and would soon pay for itself by the great rapidity and delicacy with which it works. When once this labor- and time-saving apparatus is well known, it will become a popular favorite, a position it very justly merits.

MESSRS. F. W. KERSTING, Galveston, Texas; W. D. CHANDLER, St. Albans, Vt., the Secretaries of the various Societies, and many others have sent us valuable communications, which shall have insertion soon.

THE popularity of the "WOLFE Solar Process," and the "Negative Retouching Machine," advertised by Messrs. GATCHEL & HYATT, must be very great, or they could not afford such expensively displayed advertisements as appear in our issue for this month, and in the other maga-

zines. These gentlemen are exceedingly prudent and careful as to what they "push," but when they get a good thing they know full well how to make it "go." If you want what saves time and makes money for you, act upon their offer. Read the advertisements.

DEATH. — We regret to learn of the death of three of our old-time photographers and genial friends: Dr. JOHN Q. A. TRESIZE, on June 29th, at Washington, D. C.; CHARLES PAXSON, at New York, on July 6th; and SAMUEL BROADBENT, in Philadelphia, just before our going to press, the latter aged about seventy years. We hope soon to give an extended account of their photographic careers. All were pleasant, popular, and useful men in the craft.

DR. VOGEL's emulsion process for wet and dry work is attracting great attention in Europe on account of its brilliant results, its speed, and its certainty. Already a large concern in Leipzig is engaged in the manufacture of the emulsion and prepared plates, and Dr. VOGEL is now in London negotiating for their manufacture in Great Britain. Should he be able to conclude his arrangements in time, it is possible he may make our country a flying visit on a similar errand. If he does, we shall see his genial face at the Convention in Chicago. He rather expected to set sail on August 10th. We bespeak for him a glad welcome, and, after his long years of "labor of love" in the photographic cause, we hope to see him realize out of his ingenious invention something satisfactory to him.

SEAVEY'S BACKGROUNDS IN PARIS. — Mons. JOLIOT, the famed Parisian photographer, says: "We use Mr. SEAVEY's backgrounds. No doubt our Paris artists could paint them as well, if they gave themselves the trouble; but they won't, and hence we have to go to America."

MR. W. H. JACOBY, of Minneapolis, Minn., the veteran photographer of that city, receives a very pleasant editorial notice in the *Minneapolis Daily Paper*, complimenting him on the recent improvements which he has made in enlarging and refitting his gallery. Mr. JACOBY has been a follower of the photographic art for the past twenty-seven years, about half of which time he has been settled in Minneapolis.

THE Buffalo, N. Y., local papers devote some space to a description of the gallery of Messrs. SAMO & BELLSMITH, who rank among the first-class photographers of that city. This firm have recently removed into their new rooms, where

everything in the way of convenience, improvement, and embellishment has been lavishly used to make the place attractive and pleasant for both customer and employee.

WE would call attention to the advertisement of Messrs. ROSENGARTEN & SONS, manufacturing chemists, Philadelphia. These gentlemen, for a time, seemed to have lost interest in photographic needs, but of late they have again taken up the matter, and, as our readers will see, are now prepared to supply our dark-rooms and laboratories with all needful chemicals. Many are, no doubt, pleased at this return of an old and well-known house to our interests, and we hope new and old custom will reward the Messrs. ROSENGARTEN for their efforts.

THE following will speak for itself; we clip it from the columns of the *Utica Herald*:

"There comes to us this month a copy of the *Philadelphia Photographer* for June, a monthly devoted especially to the wants and needs of the photographers of this country. It is published by EDWARD L. WILSON, Philadelphia, and the copy before us bears the number 198. It contains a large amount of special information, together with letters from foreign countries, and bears every evidence of being a prosperous publication. The particular reason why this number has found its way here is because its frontispiece consists of a lovely photograph of three children, from the gallery of WALTER C. NORTH, of this city. It is a genuine work of art, and well worthy of the nice things said about it by the editor of the magazine. Mr. NORTH is gaining a national reputation for his choice pictures of children."

MR. DAVIS, of Athens, Ga., sends us a very humorous account of his struggle in getting a *baby's* picture. The story is clipped from the *Daily Banner*, the leading paper in Athens, and is too long for us to give it in detail. However, the *finale* of the story was the triumph of the photographer, who at last "took the baby" by surprise, after having nearly exhausted himself in mad efforts to *amuse* him long enough to keep his attention.

MR. F. GUTEKUNST, Philadelphia, has favored us with some beautiful examples of photography from his catalogue of "celebrities." Among them are WALT WHITMAN, Miss E. THURSBY, JAMES E. MURDOCH, the tragedian; Mrs. LUCRETIA MOTT, and a number of other splendid portraits.

MESSRS. NOTMAN & SANDHAM, Montreal, have an excellent negative of our lamented friend, Prof. H. M. MCINTIRE.

MR. WILLIAM McCOMB, Muskegon, Mich., favors us with a batch of cabinets and cards, among which are some fine examples of portraiture. The pictures in character of A. J. MARTYNE, Esq., the noted humorist, are specially fine and well taken, representing that gentleman as "The Greenhorn in Love;" "Hypochondriac;" "Dead-Beat;" "Old Mrs. Gossip," laughing and crying, and in other humorous characters.

The two of the clown PETER CONKLIN are also excellent. Mr. McCOMB has evidently taken great pains with them, and success has rewarded him, so far as the quality of his results is concerned.

GEN. GARFIELD, the Republican nominee for the Presidency of the United States, went straight from the Chicago Convention to the studio of the President of the P. A. of A., J. F. RYDER, Esq., Cleveland, Ohio, and on June 10th sat for several admirable portraits, proofs of which we have. Mr. RYDER supplies the trade, and has wisely copyrighted each negative. The professional copyist will take notice, and not copy.

THE CHICAGO CONVENTION.—We have but little to add to what we have already said on this subject. Full particulars are given on page 245, by the excellent Secretary, and a splendid programme is held forth. The "No Friend to Conventions" house in Broadway, is, of course, displeased at the prospect of a Convention being held; but it will, nevertheless be held; and, although the attendance may not be so large to start with, a splendid society will undoubtedly spring from this effort. Strict attention to *business* will be given. As already announced, we hope to be present, and at *our own expense*—regardless?—to give the best report there will be of the enterprise. Whatever else could it be? Meet us there.

This will cause a further delay in our next issue, but we hope that all will be compensated for by the good it will bring to our readers.

Our Photographic Association of America certificate of membership is neat and handsome. The monogram trade-mark will be found on our cover, and being "an active member," we are licensed to use it thus.

THE delay of our magazine this month was mainly to insert the latest from Chicago.



J. E. WATSON

THE FISHER BOY.

DETROIT.

T H E

Philadelphia Photographer.

Vol. XVII.

SEPTEMBER, 1880.

No. 201.

Entered according to Act of Congress, in the year 1880,

By EDWARD L. WILSON,

In the office of the Librarian of Congress, at Washington, D. C.



PHOTOGRAPHERS' ASSOCIATION OF AMERICA.

FIRST ANNUAL CONVENTION HELD IN
CHICAGO, ILL., AUGUST 23D, 24TH, 25TH,
26TH, AND 27TH, 1880.

AGREEABLY to the call made repeatedly in these pages, a large body of the photographers of the United States and Canada assembled at the above time and place, in convention, for the permanent organization of a new national association, and for mutual improvement and good.

A great number had arrived in the city by Monday, the 23d inst., and of these some were busily engaged all day placing their specimens of work in the exhibition rooms.

As arranged, the entire exhibition and all the meetings were held in the apartments of the Grand Pacific Hotel (Messrs. John B. Drake & Co., proprietors), whose magnificent dining-hall was given free for

exhibition purposes, an adjoining hall for those having articles for sale, and a third—known as the Appellate Court-room—was set apart and used for the meetings of the Convention.

During Monday, the arrangement and inspection of the exhibition took the time of the photographic pilgrims until 9 P.M., when *business* was regularly opened by a grand banquet—a new and most agreeable feature in these convocations. Each member of the Photographic Association of America was provided with a beautiful ticket of admission, in the form of a palette, handsomely decorated and printed, a reduced photo-engraving of which we give.



It was artistically and tastefully gotten up, and reflected great credit upon the Committee, as did everything pertaining to the whole grand affair.

The photographers were marshalled by Mr. Drake in person, and marched two-and-two—the officers, local and national, first—from the exhibition hall to the dining-room. Here a most brilliant scene was presented. At the end of the hall was a table devoted to the officers and the photographic press, the editor of the *Philadelphia Photographer* being seated between President Rocher, of the Chicago Photographic Association, and President Ryder, of the Photographers' Association of America. At each plate was a lovely bouquet and a handsomely-printed bill of fare. The former were soon transferred to the bosoms of the ladies—for there were plenty there—and the button-holes of the masculine coats, then the latter were first examined, then put to their natural use with avidity, and without speech, ceremony, or blessing asked upon the feast.

The absence of addresses was the only drawback to the otherwise splendid occasion. There was a fine opportunity for some brilliant remarks, but both the Presidents were overcome with their arduous responsibilities, and decided that "silence would be most golden for the silver-users at this time."

At once, then, the feast noiselessly began. We must not overlook the bill of fare. It

COMPLIMENTARY BANQUET

TO THE
PHOTOGRAPHERS' ASSOCIATION OF
AMERICA,

AT THE
GRAND PACIFIC HOTEL,
CHICAGO, AUG. 23D, 1880.

The third page was devoted to the

M E N U.

SOUP.

Chicken Broth.

FISH.

Broiled White-fish, Parsley Sauce.

Boiled Capon. Roast Beef. Roast Chicken.
Roast Lamb.

Boiled Potatoes. Lima Beans. Succotash.
Sliced Tomatoes. Mashed Potatoes.
Stewed Tomatoes.

Fillet of Beef, Larded, with Mushrooms.
Calf's Head, Tomato Sauce.
Macaroni au Gratin.

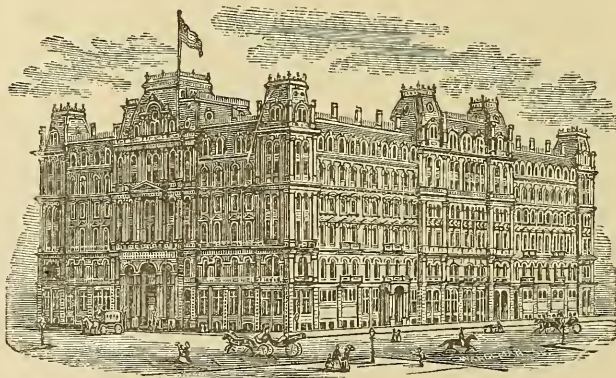
GAME.

Roast Prairie-Chicken.
Chicken Salad.

DESSERT.

Charlotte Russe.	Fancy Cake.
Confectionery.	Wine Jelly.
Apples.	Grapes.
	Pears.
	Raisins.
	Nuts.
Vanilla Ice Cream.	Coffee.

At the conclusion of the feast—about



GRAND PACIFIC HOTEL.

was printed on delicately-tinted paper, with a cut of the hotel (as above) on the first page of the sheet. On the second page was the following:

11 P.M.—the quiet, satisfied photographers retired, notice having been given that the first convocation would be held the following day at 10 A.M. During the day all the

members were supplied with cards of invitation to the opening of the Exhibition, for public distribution, signed by themselves, thus:

The Executive Committee of the Photographers' Association of America, request the pleasure of the company of yourself and ladies at the opening of their first Annual Exhibition at the Grand Pacific Hotel, Chicago.

Monday Evening, August 23rd, 1880.

J. F. Ryder, President.	Alex. Hester,	} Vice Presidents.
Henry Rocher, Treasurer.	Chas. Gentile,	
Alex. J. M. Copelin, Secretary.	G. D. Mosher,	

Eight o'clock
Compliments of *Edward L. Wilson*
Philada. Pa.

FIRST DAY. TUESDAY, AUGUST 24TH, 1880.

Agreeably to notice, at 10.30 A.M., the gavel was sounded, and a goodly assemblage was called to order, by the President, Mr. J. F. Ryder, of Cleveland, Ohio. Mr. Ryder was supported on his right by Mr. A. J. W. Copelin, of Chicago, the Secretary; on his left by Mr. Henry Rocher, of Chicago, Treasurer of the Association, and President of the Chicago Photographic Association. On Mr. Rocher's left sat Mr. C. C. Gentile, of the Local Committee. At the desk, in front, was Mr. J. H. Fitzgibbon, editor of the *St. Louis Practical Photographer*, and Mr. Edward L. Wilson, editor of the *Philadelphia Photographer*, the latter being assisted by his stenographer—the only one employed. Outside of the railing were the reporters for the local newspapers, and the members of the Convention, over 300 in number. In calling the Convention to order, President Ryder said:

Ladies and Gentlemen: With so fine a representation, and with so much promise of success in the work we have undertaken, I find great pleasure in calling you to order, and Mr. Copelin will now address you.

MR. COPELIN.—*Ladies and Gentlemen, and Fellow Members of the Photographic Profession:* I, as most other people do, am compelled to make an apology this morning, in not having a regularly prepared address for you; but my time, as some of you, perhaps, have noticed, has been pretty well occupied, and I would simply say that I welcome you in the name of the citizens of

Chicago, and the photographers of Chicago, to our city. I welcome you to our Association, and welcome you to the enjoyments and entertainments that we have prepared for you; and I hope that in the opening of the Convention, opening as it does under such satisfactory auspices, that it will continue and be successful, not only now, but in the future, and be a bond of unity between us all; and that the Convention will be held in other cities at other times, and go on to a grand and glorious success. Again I welcome you all very cordially to Chicago and to our business. [Applause.]

THE CHAIRMAN.—*Fellow Craftsmen:* Ten years ago this present summer I had the pleasure of welcoming you to Cleveland, at the Third Annual Meeting of the old National Photographic Association, in the same capacity and spirit that my friend Copelin has now welcomed us here. I am happy to meet here many who were there, and who with me witnessed one of the grandest meetings of photographers that, up to that time, and possibly to this, ever assembled in this country. We can look back to that as the crowning year of fellowship, enthusiasm, and success of that noble Association, which did more good for the craft than anything before or since. In the few years past we have lived without it, but have never lost sight of its good work. Now comes a demand for a new start. Your presence here to-day is evidence that you have not forgotten that Association, that you understand and value the advantages of it, and are ready to resume. We will let the past stand as a finger-board to the future, and by it be guided on the safe road of plain duty to ourselves and each other, and to the success that course deserves.

In the work we have come here to perform let us be earnest, manly, mutually friendly, and brotherly; let us do all the good we can for ourselves and the craft at large. As the grindstone is good for the axe, so also the axe improves the stone; in like manner we can be sharpened by pleasant contact.

I hope, with all my heart, that the organization we are here to effect shall be done in such good faith that it shall prove to be lasting, and as useful as lasting. To make it so, we must be true to the obligations we enter upon, and we must all battle together, then

shall our strength be full. Let us, like beavers, work in harmony, with a will and for a purpose, and let that purpose be the advancement of photography. We are about forty years old as a practical art, and, although we have a fair record, there are yet possibilities to be grasped.

We are here to-day by the act of the Chicago Photographic Association of April 24th—all honor to that body for calling us into existence again. (Applause.) Let us regard it as auspicious of future success; let us lay our foundations upon good ground, in the phenomenal city of America, where energy and enterprise are watch-words, and in whose lexicon there is no such word as fail. [Applause.]

Mr. Copelin will now read a few letters bearing upon the interests of the Association.

MR. COPELIN.—This Association was first started, and the organization contemplated, as early as last March, and at that time letters were sent out to different prominent stock-dealers and prominent photographers throughout the country, stating that we desired to form an Association, and asking their opinion; and also asking whether they would aid or assist in making it.

Here Mr. Copelin read letters from J. Landy, Cincinnati, Ohio, and G. H. Loomis, Boston, both favoring the new organization, with many good wishes, and also the following:

NEW YORK, March 19th, 1880.

ALEX. J. W. COPELIN, Esq.,
Secretary Photographic Convention.

DEAR SIR: We are in receipt of your favor of March 16th, advising us that a photographic convention and exhibition will be held in Chicago in August next. We believe that the best interests of photographers will be subserved by the proposed Convention, and we congratulate the projectors of the scheme upon their good fortune in securing the services of Messrs. Hodges and Douglass as their committee.

The eminent executive ability of these gentlemen is universally recognized, and their association in the management of the enterprise argues complete success for the Convention.

You will please count on the cordial co-operation of the Scovill Manufacturing Company in any measures which shall tend to advance the interests of said Convention, and draw on the

company for \$50 to aid in defraying the contingent expenses.

Yours very truly,

SCOVILL MANUFACTURING CO.,
W. IRVING ADAMS, Agent.

NEW YORK, August 17th, 1880.

A. J. W. COPELIN, Esq.,

Secretary, Chicago.

DEAR SIR: Your two letters of 13th came to hand yesterday, and we inclose check for \$50 as requested. Our subscription was made merely to help the Association along, as we ardently desire its success; and as we are of the opinion that the introduction of the "Trade" element would seriously interfere with its prosperity, we prefer that you should not put us on the list of members.

No association could have started under better auspices than the N. P. A., and if the membership had been confined to photographers, it would doubtless have continued a useful body to this day.

Earnestly hoping that the Association will give the cold shoulder to all schemers, we remain,

Yours very truly,

E. & H. T. ANTHONY & CO.

Boston, August 16th, 1880.

A. J. W. COPELIN.

DEAR SIR: We inclose check for \$25, said sum being our subscription to the P. A. of A. I shall not be able to meet with you this year, but you have my best wishes for the success of the new Association. I hope you may have a good number of photographers there. Nothing so good for the advancement of our beautiful art as to get the photographers together and compare notes and see what each one can do, and let others know how to improve.

Yours truly,

B. FRENCH,
Of Benj. French & Co.

Loud applause welcomed these kind expressions, and then Mr. Copelin said: As a great deal has been written and said in the journals, in the last two or three months, in regard to who is and who is not eligible for membership, and whether dealers shall take any part or not, I will read one letter bearing on the subject. (This letter was from Messrs. E. & H. T. Anthony & Co., New York, and is given above.)

The Secretary now called the roll, which footed up 237 names.

The Chair announced the following committees:

Committee on Credentials.—C. W. Motes,

Atlanta, Ga.; R. Benecke, St. Louis, Mo.; J. H. Reid, Clinton, Iowa; D. N. Carvalho, New York; W. G. C. Kimball, Concord, N. H.

Committee on Constitution.—W. W. Washburne, New Orleans, La.; A. N. Hardy, Boston, Mass.; E. Klauber, Louisville, Ky.; Isa Black, Franklin, Pa.; J. E. Beebe, Chicago, Ill.; A. J. W. Copelin, Chicago, Ill.

On motion of Mr. Klauber, a committee of seven was appointed to witness an exhibition of dry plates, and report to this meeting.

The following Committee on Dry Plates was appointed: E. Klauber, Joshua Smith, J. H. A. Parsons, H. R. Marks, G. H. Sherman, Fitz Garvin, and S. L. Stein.

MR. FITZGIBBON.—I think the first business should be organization, before any motion is adopted, or anything else is done.

MR. KLAUBER.—I consider that this Convention is an organization by the action of the Chicago photographers calling this Convention, and electing their officers. The full organization you will not have until you have adopted your Constitution and By-Laws; nevertheless, I think we are working now as a full Convention of the Photographers' Association of America. That is the name that was adopted by the Convention of Chicago; under that name we were called together, and under that name, and under the officers then elected, we are now working; therefore, I think that any motion for the good of this Convention ought to be in order.

Mr. Carvalho offered the following:

Resolved, That it is the sense of this body, in convention assembled, that the thanks of the whole fraternity at large are eminently due to the Photographic Society of Chicago, through whose efforts we are to-day assembled, and such thanks are hereby tendered. [Applause.]

The resolution was unanimously adopted.

MR. ROCHER.—*Ladies and Gentlemen of this Convention*: On the part of the Chicago photographers, I express my most hearty thanks for your applause of what we have done. You can feel just as we have felt. We have tried to revive the old N. P. A., which has done so nobly and so well for the whole craft, and we feel that now we must

take the initiative, for the purpose of reviving that Association. We came to the conclusion that the child could not sleep any longer; it must be awakened, and we are glad that so far it has proven a success; that we have a meeting larger than we really expected; that we have contributions which show so much progress over the exhibitions which we attended last. It shows us what this Association may do, and we shall better be able to realize what is being done if we meet every year, as we have done in years gone by, and exchange thoughts with each other, exhibit our pictures, and show what progress we have made. I think all of you who appear here are greatly in favor of reviving the old institution just as it was, but on a better basis than it was, and not letting it sleep again. I must again heartily thank you for your approbation. [Applause.]

Mr. Carlisle raised the point of order that until a permanent organization was effected no business could be done.

THE CHAIRMAN.—The Chair regards this meeting as in order. It is called here and organized by the Chicago Photographic Association. We are here under a temporary organization; the permanent organization will occur at the next session, on the adoption of our Constitution; that is my understanding.

MR. COPELIN.—Mr. President, the gentleman (Mr. Carlisle), if you will allow me, is laboring, in a slight degree, under a mistake. This Association was called together on the fourth of May last; the photographers of the country, and any one who felt an interest in the organization of an association, were called together. They at that time formed a definite Association, and elected their permanent officers, and every gentleman who has subscribed his name to this Association, Mr. Carlisle included, subscribed to an association already formed, with a name, a trade-mark, and a certificate of membership already adopted. This is not a new formation of a society; it is simply the first business meeting of the entire body of photographers. A large number of photographers have been present before on two or three different occasions, at meetings of the Association, and

this is simply the first full meeting of the members, but all the gentlemen who have joined, as I understand the matter, joined an Association already formed. The present officers of the Association were elected to hold their offices up to and including this present Convention. At any time that the majority of the members of this Association choose, new officers will be elected; but the present officers were elected to hold their offices up to and including this Convention. That is my understanding of the matter. [Applause.]

MR. KLAUBER.—I think the most necessary thing to be done now, Mr. Chairman, is for the Committee on Constitution to get to work and frame a Constitution in such shape that this Association will not be for only a few days, but will be an Association forever and forever. I, therefore, move that we now adjourn, to meet this afternoon at three o'clock, so that the committees can go to work and do their duty.

MR. COPELIN.—One moment, please; we have an invitation that I would like to read to the Society. (This invitation was in the form of a beautifully printed card, on which was a cut of the steamer "Flora" printed in

The motion was adopted by a rising vote.

The Secretary announced that a lantern exhibition had been kindly proffered to the Society by Professor T. J. Mapes, at eight o'clock this evening, and the offer was accepted with loud applause and thanks.

The Association then adjourned until 3 P.M.

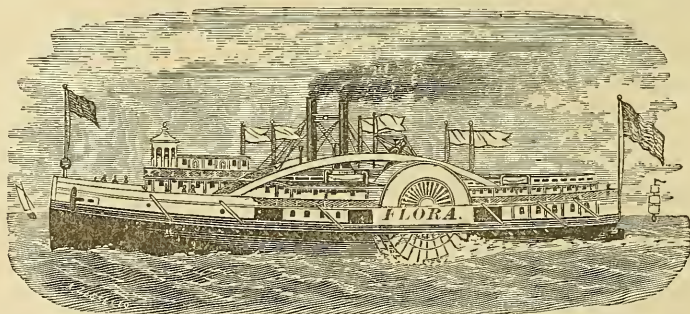
AFTERNOON SESSION.

The Convention was called to order at 3.30 P.M.

The Committee on Credentials made a minority and a majority report; the point of difference being as to whether non-photographers, who became members of the Association, should or should not have the privilege of voting. After considerable sparring on both sides, the report was referred back to the Committee for revision.

The report of the Committee on Constitution and By-Laws was now called for, and Mr. Gentile, for the Committee, read a form which was offered for adoption, based largely on that of the National Photographic Association.

After a motion to adopt the offering of the Committee, a discussion of over an hour occurred as to whether the adoption should



gilt, over which, in black, was printed the following:

HIRAM J. THOMPSON, 259 WABASH AVE.,
PRESENTS HIS COMPLIMENTS,
AND REQUESTS THE PLEASURE OF YOUR COMPANY,
WITH LADIES,
FOR AN EXCURSION ON THE LAKE,
WEDNESDAY, 25TH INST.
STEAMER "FLORA" LEAVING CLARK ST. BRIDGE AT
2 P.M., AND RETURNING TO THE CITY AT 6 P.M.)

I move that the invitation be accepted for tomorrow afternoon, at 2 o'clock, with thanks.

be as a whole, or section by section. All assemblages love to tinker at the *Constitution*, always, and here was no exception. After the speakers had become exhausted, it was finally resolved to take up the matter section by section; all parts not objected to being considered as adopted.

The Secretary now read the preamble and sections in order. Very few changes were made until the great bugbear of the N. P. A., the salary of the Secretary, came up for consideration.

Mr. Klauber moved to amend the Constitution so that the Treasurer shall give a bond of \$500, with two bondsmen; which motion was seconded and carried.

Mr. Klauber moved that the Secretary and Treasurer, for their services rendered to the Association, shall be exempt from paying their annual dues.

Mr. Fitzgibbon offered an amendment, that the Treasurer receive 5 per cent. of the gross receipts.

Mr. Schleier, addressing the Convention, said, that on the question of salaries, he did not think philanthropists could be found among officers of societies like this. His experience had been that where societies do not pay their officers for the work they do, they do not get the work done properly that the society demands of them. The higher the officers are paid the better they do their work. The Society wanted officers who would do their work promptly and efficiently, and it was not right to expect them to do, without pay, what other members would not do themselves.

Mr. Klauber moved that the Secretary receive \$25 annually. Amended so as to read 5 per cent. of the gross receipts, to make it the same as the Treasurer's salary; which amendment was seconded and carried.

The last section of the Constitution was adopted without objection.

The By-Laws were adopted with little objection.

Mr. Bankes moved the adoption of the Constitution and By-Laws as a whole. Seconded.

Mr. Klauber moved, as an amendment, that the motion to adopt the Constitution as a whole be laid over until the next session. Seconded. Which amendment was afterwards withdrawn. The motion to adopt the Constitution as a whole was then carried.

Mr. Klauber moved that the Committee on Constitution be discharged, with the thanks of the Association. Seconded and carried.

Mr. Bankes moved that the Constitution and By-Laws be referred to a Printing Committee, consisting of the President and Secretary. Which motion was adopted.

The Chairman appointed the following

Committee for the nomination of Officers, with instructions to report on Thursday morning: John Carbutt, M. Wolfe, W. A. Wheeler, Isa Black, E. Bierstadt, R. Be-necke, J. H. Lakin, T. W. Bankes, G. M. Carlisle, and L. D. Judkins.

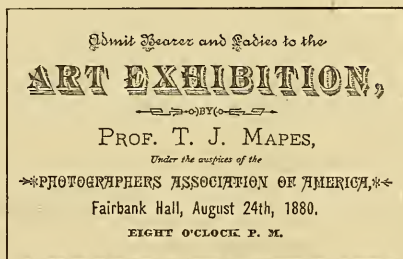
MR. KLAUBER.—I wish to offer this list of names, which I will ask the Secretary, to read, as honorary members of this Association.

THE SECRETARY.—Dr. H. Vogel, Berlin, Prussia; M. Leon Vidal, Paris, France; Prof. Edward Stebbing, Paris, France; Col. H. Baden Pritchard, London; Mr. W. C. Bolton, London; Dr. E. Horning, Vienna, Austria; Mr. H. P. Robinson, Tunbridge Wells, England; Dr. Ed. Leisegang, Dusseldorf, Germany.

Which motion was seconded and carried.

The Convention then adjourned until 10 A.M., Wednesday, August 25th, after an invitation had been given, and tickets supplied, for an art entertainment with the magic lantern, at Fairbank Hall, by Prof. T. J. Mapes, at 8 P.M.

The invitation card, reduced by photo-engraving, read, viz.:



Pursuant to the above, Fairbank Hall was crammed, and Prof. Mapes entertained his critical audience for nearly two hours with a most charming lantern exhibition. The slides used were mainly selections from the various foreign makers (furnished by Mr. Edward L. Wilson, Philadelphia), with a few contributions by Messrs. T. H. Johnston, Thornton, Ill.; C. C. Gentile, Chicago, Ill.; and views of Dixville Notch, N. H., from Carbutt's bromo-gelatin plates, by Edward L. Wilson.

The exhibition was one of the most brilliant it was ever our privilege to see. The oxyhydrogen light was used, and the pic-

tures were projected nearly twenty feet in diameter. Prof. Mapes's dissolving effects were beautifully managed, and astonished many. A new feature of showing two pieces of statuary at one time on the screen was very much applauded, and all through the gifted lecturer was frequently interrupted by applause.

The exhibition, as a whole, was a great source of delight and instruction to the large body of photographers present, and certainly one of the brilliant successes of the Convention week.

The séance closed with a colored slide ("Good-night") of the sleeping twins, from a negative made by Mr. R. Uhlman, St. Joseph, Mo. It was loudly applauded.

SECOND DAY. WEDNESDAY, AUGUST 25TH, 1880.

The Association met, pursuant to adjournment, at 10.45 A.M.

On motion, the reading of the minutes of yesterday's proceedings was dispensed with.

Mr. Klauber, for the Committee on Dry Plates, reported progress, and announced that its report would not be ready until Thursday morning.

On motion of Mr. Fitzgibbon, the names of Mons. E. Letellier and Captain W. de B. Abney, of London, England, were added to the list of honorary members of the Association.

In view of the fact that the adoption of the Constitution provided for the status of membership of the Association, the Committee on Credentials were, on motion, discharged.

President Ryder now read a paper on

PHOTOGRAPHIC JEALOUSIES.

ONE of the great obstacles to business success in photography lies in the antagonisms growing out of jealousy. I am glad I can say this is not universal; but there is so much of it, and so much harm comes of it, that, as we are here for the general good of the profession, it may be well to touch upon it.

It is too much a fact, that, on seeing a photograph of a party we consider a friend and regular patron, in a neighbor's show-case, or in the albums of other friends, which were made by a competitor, we feel a pang of jealousy and a sense of injury that we have been passed by, and the

other man preferred. We should outgrow that feeling as unworthy of us. It is natural that our friends should be curious to sample about, and try the other man, the same as it is for us to try another tailor, or our wives another milliner. Our competitors have just as good a right to do business as ourselves. We must not expect to monopolize whole towns or cities. If we wish to attract more business than we have, we must do it through the quality of our work and agreeable manners with our patrons.

In the matter of prices, in many cases, good work—even first-class work—is sold below a price that is respectable, creditable, or profitable to the producer, and is largely damaging to the profession at large. The misguided few who practise this short-sighted policy to overreach a competitor, lose sight of the fact, that they are overreaching themselves and helping to demoralize a respectable calling.

As a rule, the photographer is not sufficiently paid for his labor. He who bases the profits of his business upon such percentage above cost of material used as governs the usual manufacturing or mercantile interests, has much to learn.

The man who tells his patrons it is time to pay when they get their pictures,—that he does not impose upon his customers by requiring prepayment,—simply invites imposition. He who cheerfully makes a dozen sittings, and proves them all for his customer to make a choice,—and possibly gets an order for half a dozen,—is too good a man to ever amount to anything as a business photographer.

It is very difficult to make arbitrary laws, and stand squarely by them, in our profession; but we can at least look toward some general rules that could benefit all parties. We owe our patrons consideration, respectful attention, and our best efforts of skill. When we are sure we have given these,—that we have done the subject justice and ourselves credit,—they should understand it, and our efforts to please be recognized.

It should not be expected that we make re-sittings in a half dozen toilets, differing at each visit, without extra charge; yet, where one man in a community practises this folly, it makes trouble for all the others.

The exactions of the people are much greater than formerly, and it is difficult to cater to the whims of those who really do not know what they want. The way to meet these uncomfortable requirements is by making a proper charge, to cover extra work; the way to meet it successfully is for photographers to have plain understandings with each other, and all faithfully live up to them. We see rivalries and jealousies in

most professions; we hear of it in church-choirs; we remember Dickens's showing of the "Buffs" and "Blues," represented by the rival newspapers, the *Eatonville Gazette* and the *Independent*. We allow ourselves to comment unfavorably upon the folly of it, yet fail to see it in ourselves—do not see that the public amuse themselves, and take advantage of this weakness so palpable to all but us.

Truly, it is time to get our eyes open. One of the great wants of the photographic fraternity for healthful growth is more local societies, more neighborly feeling, more friendships—more "*United we stand.*"

In all this great country, there are not more than a half dozen societies that report themselves to the journals; beyond that, we are not expected to know.

I am glad to see in New York a move among the operative photographers in that direction, their object being mutual improvement and information between themselves and employees. I am told that they are very careful in their admissions to membership, as they want none that they cannot conscientiously recommend for positions.

The society can be valuable to themselves and photographers desiring help. I would earnestly advise every man here, on his return home, to encourage the establishment of a society, and see to it that it is well attended. If there are but two photographers in his town, let the society be started all the same; take the wives and children in for members; let the meetings alternate between the two homes, and be as frequent as possible. In this way sociability will be developed, good understandings follow, and jealousies vanish.

Two boys engage in throwing stones at the chimney of an old house, taking opposite sides, and at equal distances apart. Occasional "close calls" fall near the boys, which are at first taken as jokes, but soon take the guise of no jokes, and are met with sharp cautions, and finally with threats. At last comes a blundering stone, which cuts its way into the lip of one of the boys, and necessitates his going over to the other side, to keep his promise with the other one. After the business of his visit is accomplished, that particular side shows superior advantages as a throwing-point, and when, by mutual consent, they resume the sport, the advantage of seeing each others' shots, avoiding blind missiles, and working together, is so palpable, a lesson is learned by them, and a society is formed on the spot.

My friends, do not be above taking a lesson

from an humble source, if there be merit in it. If one-half the pains were taken to be friendly and sociable with our competitors, that we take to ignore them, we could have the satisfaction of thinking better, both of ourselves and them—doubtless also of the gains from our business.

If this really means any of us, let us commence now to be ashamed, and start out with an honest resolution to mend.

[Applause.]

Mr. Wilson stated that Mr. H. Rocher, of Chicago, had prepared an excellent paper on "The Relation of Photographers to the Public and the Public to the Photographers," which he intended to read, but being unwell to-day, asked the patience of the members of the Convention until they could see the paper printed in full in the *Philadelphia Photographer*. [Applause.]

THE RELATION OF PHOTOGRAPHERS TO THE PUBLIC AND THE PUBLIC TO THE PHOTOGRAPHERS.

Mr. President and Gentlemen of this Convention:
At one of the meetings of the Executive Committee of this Association, the task was assigned to me to prepare a short paper on the above topic. Very reluctantly I assented to do this, and for various reasons. I will not speak of my many engagements in my business, nor of my, indeed, very feeble health, which are reasons enough in themselves to forbid my entering the arena as a speaker on this subject; nor would it be fear to divulge my views in a matter so much agitating every photographer's mind, knowing too well how isolated my standpoint is, and how little I enjoy the hearty co-operation of most of the fraternity; it is not even the sneers from the many, who know better, that will greet my remarks, that can deter me from speaking fearlessly the truth, and nothing but the whole truth. But even if my remarks find favor with a few, and these few feel strength enough in themselves to adopt some of my principles, I will feel amply compensated for having complied with the request of our Committee.

In thus prefacing my few remarks, let us come to the point at issue: The relation of the photographer to the public, and *vice versa*. These relations I consider, and always have considered, to be purely mutual, from an artistic standpoint as well as from the business standpoint; and as we all have to live on and by what we do, the latter standpoint is the one a little stronger appealing to our consideration. In regard to the

former, the artistic standpoint, I take it as granted that every one of us works as conscientiously and carefully as his abilities will admit him to do; but regarding the latter, why do we hear so many complain about—I will not exactly say bad business—but of low prices? Do not low prices in almost every locality predominate? and is it a stimulant for earnest workers in our vocation to go on and offer to the public continually the fruits of their brains and talents at sham prices? Where do you think this will lead to? This leads unavoidably to self-degradation. And this brings me to the very point in which I would say the relations of the photographer to the public are misunderstood. You have lost your self-respect, and the public mean to do with you as they please, and not as you should do; for in your house and business your rules must stand, and you must abide by them, or you must bear the consequences—fall, and lose the so very necessary respect of the community.

The words: "Guard your dignity!" have so often been printed in our photographic journals,—words full of good, very good advice. This is another point where the relation of the photographer to the public is seriously implied; but how many have heeded this advice? If you wish to be respected, make the public respect you for everything that you say, do, or they see about you. Be firm in what you transact with your patrons. If you say "Yes," be it yes, and if "No," be it no; in short, have *strict* rules for the transaction of your business, and adhere to them without faltering. It may be, in the beginning, a little difficult to introduce a little more exacting regulations in business, but you must try it; for, without having tried a thing, you cannot fairly speak on its merits. A correspondent in a late number of a photographic journal, said about the speaker, meaning myself, "R. is the only one in this city who treats his customers perfectly independent, and makes them pay high prices." This is in fact the case; he did not say too much; but you must not make the reply, that "whatever I do, you cannot very well do in your business." Yes! you can, if you only want to; and everybody, every photographer, can and should do it, and, if you will only try it, you will soon feel the good results. Do not misunderstand the words of that correspondent when he says, "he treats his customers perfectly independent;" they sound worse than they are meant; they simply mean: I am firm, and deviate not from my rules or prices; and if, in very few instances, objections were made, we would politely tell the visitor that we would rather decline to work than do his bidding; this generally settles the case in our

favor. Now, if such rules were to be introduced more energetically in the photographic business, there would be far less complaints on the part of the photographers of losing the esteem of their patrons; for you will probably all admit, that a man that stands boldly up for his principles stands a better chance to gain respect and confidence with his patrons than one who totters and trembles for fear of losing a dollar, and for that sake gives way to making all kinds of concessions.

At the conclusion of this little essay, I wish to touch upon the so-much-complained-of nuisance—the resitting of persons.

We all know that we are liable to fail sometimes, but failures should be carefully avoided, and a sitter only then dismissed when you know and are convinced you have secured the best possible result. With this conviction as a base of action, be firm in according to your patron what your stipulated rules, if you have such, grant him in the way of a resitting, and no more; for if, as in some instances which I could here relate, an almost endless number of sittings is given, the latter would, for caprice sake, soon become the rule of the day, and you might well look out for time to give a new-comer his first sitting. From a financial standpoint, this is the greatest nuisance photographers have to battle against; and you should adopt rules which will guard against this evil.

As I presume that the regulations and rules which I have laid down for the conducting of my business are sufficiently known, I defer from repeating them here. Suffice it to say that they stand for the last twelve years unaltered, and the number of resittings, of which I keep a correct account, amount to no more than from three to five per cent.

Gentlemen, time and space preclude a further spinning of this yarn, but as this is only the opinion of one man out of so many in the profession, I think it would be beneficial for all of us if many more would ventilate their views upon this subject; for I consider the discussion of this subject one of the most important ones to benefit our fraternity.

H. RÖCHER.

The Chairman now introduced Dr. Norman Bridge, of Chicago, who delivered an admirable lecture on "Poisons in Photography."*

* As we are obliged to divide the report of the Convention into two, and Dr. Bridge desires to revise his paper, we must lay over its insertion until our next issue.—Ed. P. P.

Dr. Bridge was followed by Mr. L. W. Seavey, of New York, on "Backgrounds," etc.

BACKGROUNDS.

LET us lay aside all other considerations of the Convention, and take up for a time Photographic Backgrounds and Accessories—the production of them—the employer of them—their relations to each other and to the public.

What, briefly, are the changes through which backgrounds have passed?

In the earliest photographic days they were painted perfectly plain—sometimes white, sometimes black, and afterwards of a middle gray. Then came those with rivers and mountains and romantic castles, more valuable for their designs than for their photographic value. Then we had an era of the vague, the suggestive, the undefined, when all were painted as if out of focus.

At about this period the Rembrandt became necessary in every enterprising gallery, and for a year or more it practically superseded all others. Afterwards, a revival of the landscape and the interior came, more clearly defined, and with more breadth of light and shade.

The usual dimensions, 8 x 8 feet, were changed to nine feet in height by ten feet in width, and two and three effects were combined on the same canvas, thus occasioning an advance in price. Next we had the *vigorous* style, with strong contrasts, and now the elaborate and realistic are in vogue.

There have been represented the snowy mountains of Norway, and the parched plains and majestic temples of Egypt; the frozen lake, with skaters, and the garden and orchard with their flowers and blossoms; the forests of America and the jungles of India; the sea-shore and the mountain-top; the cathedral, the garret, and the kingly palace; the elegant French boudoir and the severe Eastlake drawing-room.

Our accessories, beginning with a fluted column, advanced, after some years, to the rustic gate, then the artificial rock and rustic arbor. At length, emancipated from the house-carpenter, came the balustrade, in imitation of stone, weather-worn and ivy-covered; then the introduction of set or profiled pieces, after the manner of theatrical scenery, this being a new adaptation of an old idea. Soon the country was invaded by a flotilla of small boats; after which, cottages, bridges, classic columns, and trees, until now we have pianos and rustic stiles.

Our furniture has advanced from the undisguised posing-chair, with its fringed and movable

arm, at one time considered indispensable in every gallery, to the rich antique, and the chair of modern design, as seen in actual use in our homes. Gradually have richly carved tables and fire-places come into use; Persian rugs take the place of door-mats and cheap carpets, and rich curtains of heavy material have superseded the once popular flimsy silk curtain, with its Grecian border and big tassel.

With these changes our skylight rooms have been enlarged, to admit making a greater variety of pictures, and of storing and using the numerous backgrounds and accessories which now play so important a part in the production of photographs.

In view of the progress already made, it would seem that the field is but just entered upon; that with new conditions, and impelled by the insatiable demand for novelty, coupled with fertility of invention, constant progress will be made, and a wealth of assistance will be ready for use at the hands of the earnest photographer.

In order that the background painter and the photographer may work together successfully, each should consider carefully the possibilities and limitations of their respective arts. And the photographer will do well, when he has conceived an idea requiring the assistance of the other, to avoid vague generalities when explaining his plan, and, on the contrary, enter minutely into all the details. This latter course will not only enable the painter to better see his way, but give him an opportunity to anticipate and avoid the impracticable, besides help to develop the original plan.

A trained eye, with cultivated taste, enables the photographer to see more clearly the possibilities, and he seizes upon and elaborates many thoughts but partly expressed in the background, thus continuing the process of invention after the painter has finished his labors.

The numerous ways in which a background or accessory may be used are not apparent at first sight. Frequent use, continued experiment, and study alone reveal them. Much pleasure is afforded me when I see that my works have been used understandingly; and pleasure, mingled with surprise, when they are put to new and good use upon which I had not calculated. My respect for a photographer increases with his advancement, and I feel more firmly bound to do for him my best when executing his commands.

We are all stimulated to our highest activity when much is demanded, and we are interested when working out an idea above the level of our every-day pursuits or thoughts. This will account for the time which some of our enthusiastic

friends spend when the presence of a good model or sitter offers the opportunity.

The professional artist painter of landscapes or figures is not content with the practice found in the execution of his usual subjects, but periodically takes days and weeks for the close study of nature, in order that he may advance to a higher plane.

Recently I have seen great improvement in the work of an artist friend after only an eight days' sketching trip on the Hudson; and I have no doubt but that photographers will find themselves benefited if they will frequently practice posing, composition, and landscape photography solely as studies. The real falls short of the ideal, and the photographer should in his ideas be in advance of his power of execution. When he is satisfied with his results, then he may be certain he has struck his highest level, and is in danger of receding or being eclipsed by a more ambitious and persistent worker. I would urge study, because the mechanical photographers are being gradually dropped from our ranks, and ere long it will be generally conceded that the portrait and landscape photographer must, in fitting himself for his profession, study the arts of design, drawing, perspective, composition, and, possibly, color.

In reference to your manner of using backgrounds and accessories, I would urge consistency. The practice of making poses with an inappropriate background, presuming on the ignorance or want of taste of your patron, is dangerous.

Pray do not use landscapes with base-boards, carpets, and chairs; or interiors with grass mats and rustic fences. Be reasonable. Not everything is possible with the universal background, however numerous and wonderful its combinations. Avoid posing too near perpendicular lines, which are frequently introduced to give firmness to the composition and value to the curved lines of the picture. Children should never be posed standing on the floor in front of interiors with high wainscots, the lines of which would cross the figure at the head or neck, and the whole be too dark for the usual short exposure.

If your side-light is strong, and near your sitter, it will be well to employ a movable screen of unbleached muslin, three feet wide and seven feet high; this, placed at right angles to the background at the end nearest the side-light, will admit a soft light, and prevent the light haze over what would otherwise appear much darker and fully detailed. Frequently diffused top-light immediately in front of a background will destroy the detail. This can be corrected by pulling down the shades, or suspending a strip of thin,

bleached muslin from wires passing along both edges.

To obtain detail throughout the entire background, use large lenses placed at a good distance. On backgrounds and sitters the common fault is too much light, and practically too much *front* light. Under a proper amount of top- and side-light, accessories and drapery present more detail and a greater quantity of shadow than otherwise.

If the first tint of your background is not dark enough for some chance sitter, turn it slightly from the side-light, or *vice versa*, towards the light; and if your instrument lacks depth of focus, place the background as near as possible to the head-rest.

Delicacy is obtained by using light backgrounds, vignetting the prints. Vigor, by using those with strong contrasts, sparkling lights, and deep shadows. Repose, by using those low in tone, with quiet detail.

Often you can combine two backgrounds by placing a tree or column at the junction, thus producing new, and sometimes novel, effects.

As the critical moment is that when the pose is being made and the accessories arranged, I would urge that the photographer neglect not the many devices which help his art, but study to have them near at hand, ready for instant use.

Backgrounds should be evenly strained on light but strong frames, one on each side, provided with portable feet, with hooks to suspend from the ceiling, or arranged to run in grooves at the side of the room, where they may be safely kept when not in use. Carefully handled, guarded from water, and occasionally dusted, they will last for years, and frequently improve in quality with the mellowing of time.

Now, what are the values and relations between the background painter and the photographer? Briefly these: The photographer is able to call to his aid one possessed of especial training to strengthen himself by a division of labor; to bring to his gallery the resources of the outside world, to combine with his own efforts those of another; to supply his shortcomings; to gain strength by co-operation, and by artistic fellowship.

What position does the public hold? There is no longer indifference on the subject. The fond mother wishes her darling seated in a pretty boat; or, in winter, requests the hand-sleigh, artificial snow, or, perhaps, a snow-storm; the adventurous youth desires a sail-boat; the romantic young woman prefers to wander by the sea-side, on the mountain-top, or to pose herself by the garden lake. The soldier demands his

camp-ground; the oarsman, his river; the actor, his scene; and the individual possessed with a taste for decorative art and bric-a-brac, implores to be surrounded with vases, idols, and a halo of jugs and jars and Japanese fans.

Our American wealth of invention causes us to seek untried fields, until now we out-French the French and out-Dutch the Dutch.

Mr. Seavey further said: I am sorry to announce to you, ladies and gentlemen, that I shipped from New York a very large box containing some accessories which I had prepared expressly for introduction at this Convention. These cases have not arrived, and I shall have to fall back on my own resources, and convey the idea to you by sketches on this board. A short time ago, a hint was given to me that possibly a new accessory might be introduced, and the idea is briefly this—to take the letters of our alphabet, and represent them by means of profile pieces, such as have been in use. These letters are to be about 6 feet 6 inches in height, and represented as if made of the branches and trunks of beech, birch, and other woods of the trees with the bark on, and then to decorate these letters with running vines—the ivy, myrtle, and, perhaps, with the clematis and others, roses, etc. The connection with the subject is simply this.

Suppose that a young lady wishes her picture taken, and her name is Clara; the idea is at once suggested that we use the letter C; and we pose Clara within the letter C. The photograph then becomes what we may term an initial or monogram letter. I will give you a few off-hand sketches, as I have not the letters to show you.

I may as well begin with the first letter of the alphabet. Suppose the letter to be A, and the young lady to be Arabella, and the letter to be terminated with the arbutus (illustrating). I shall not have the time to put the figures in this, because I have some other sketches to make, and it would occupy too much of your time. You see that it is the letter A. The pose naturally suggested is, the figure standing either immediately in front, and the letter forming the background to it; or standing behind, and leaning on the cross-bar of the A. You readily see that the whole letter will admit some very

nice positions. The background preferably used for this would be one after the style of what is known as the "Apple-blossoms" reconstructed. [Laughter.]

But it is not necessary to have one letter for each, or to have as many letters as there are letters in the alphabet, because we can make letters by using the I as a foundation. You see here is the letter I. Irene would be standing around the letter,—putting her arm around it, as if it was Isaac out late at night. [Laughter.]

The first suggestion would be B. We will suppose that is D (illustrating). I have two pieces, joined with a tongue and curve to it, and that forms D. The next letter we would say would be P. That is a piece by itself; a part of letter only, which is added to this foundation stem. The next would be B, and the next would be R.

Many combinations may be made with the I as a foundation. The first would be F; the next would be E; then you can change it to T. You can make five, and sometimes eight or ten, letters with one foundation to start with. C is the foundation for O, which is made by filling in the side; and Q and G. The H affords an opportunity to pose the figure leaning on this cross-bar, or, perhaps, seated on it, in the case of a child. I have some photographs with me which will more clearly and more rapidly illustrate these thoughts.

I think that these accessories have this value—first, they are novel; they give an opportunity to use a great variety of floral decorations; they can be used, if not for the every-day practice of the art, for occasional practice, and especially in making up frames, where you wish to attract attention to your gallery by the novelty of your work.

I will pass on, now, to my other suggestions. These last can be arranged, not only for use in summer, when the decorations would be floral, but in winter, when the letters would be covered with snow and ice. They can also be used for anniversaries of weddings—for instance, 1880, 1492—and that kind of thing.

The practice of sketching from nature—a subject which I shall now commend to you—is analogous to that of *photographing* from nature. The careful artist, before start-

ing out on a sketching tour, will prepare himself with charcoal pencils, crayon, and so on; but, for rapid work, charcoal is best. Here, however, the dry paints, to introduce lights and shadows, come in.

After arriving on the spot, we proceed, first, with the charcoal, and then with dry paints afterwards; and then, by means of adding a little crayon, we intensify the blacks.

The sketch, which I will now give you is one I made on a journey to New York City from the western part of that State. Our train was approaching Canandaigua, and, for some reason, it stopped on the bridge which spans the outlet of Canandaigua Lake. I was carrying in my pocket a fountain pen; and, after the train had stopped, I noticed there was a good subject for a sketch outside. The train started again in about five or seven minutes. I will now give you the sketch. (Here Mr. Seavey sketched, off-hand, a very beautiful landscape, and was attentively watched as he skilfully proceeded with it.) When finished, he proceeded, viz.:

You will observe the method in which I began. It is analogous to the appearance of the negative in course of development. First, the shadow outline begins to appear, which was the skeleton of the landscape; those fine lines gave me the bearing of the whole picture. The perspective lines carry the eye of the spectator off into the distance—a point which you should carefully observe in selecting the position for your camera. Unfortunately, you cannot chop down all the trees which are in the way; but the artist, with pen and ink, or paper and crayon, can omit these trees, and can also supply a pretty spot of sky or clouds that he has seen, perhaps, a few moments before, or something which he sees soon afterwards.

My next sketch will be a very hasty one, representing a novel background for a head. (Here Mr. Seavey sketched a portrait group of two ladies, the second serving partially as a background for the first. It was very effective.) Mr. Seavey then said: I have to apologize; my hand is so covered with perspiration that I have spoiled the face of the figure in the background; but that is taken from the photograph, and it occurred to me that it was an excellent illustration

of how two sisters might be photographed, one forming a background for the other.

MR. WILSON.—I move a vote of thanks to Dr. Bridge for his excellent and very useful paper. [Cheers.]

Seconded, and carried unanimously.

MR. WILSON.—As to Mr. Seavey, Mr. President, I move you also a vote of thanks to him. He has shown us a great deal, and told us a great deal, and, undoubtedly, given himself away in teaching us how easy it is to make a background in a very short time. Moreover, he has shown us how immense must be the profits of his business. [Laughter.] I move we thank him for all his goodness to us.

Seconded, and carried unanimously.

MR. COPELIN.—Mr. Carbutt desires me to say in advance, that on the arrival of the boat at Evanston, Mr. Edgeworth will make a photograph of the entire assembly.

Mr. Klauber asked that the Committee on Dry Plates meet him at half-past seven, this evening, at his room.

MR. MOSHER.—I have very hastily drawn up two papers, one pertaining to a "Photographic College," and one to a "Photographic Protective Life Insurance Company;" and I will read them, with your permission, so you can talk them over this afternoon, and to-morrow morning we can bring in a report. And, first, for the "Photographers' College."

Mr. Mosher read, viz.:

There is another very important medium through which we can enhance the value and price of our photographs, and place them in the higher scale of art, and that is, for this Convention, before it adjourns, to appoint a committee of three, with power to hire a suitable place for a photographic college, equipped with three or four professors, to give lectures on lighting and posing—one for manipulations in the dark-room, one for printing, one for retouching—where there can be a school attended at least thirty days in the year; where the art of photography can be taught, with all its branches, in a regularly equipped photograph gallery; and, one hour every day, the full class to receive a lecture from one of the professors, on some one of the various

branches; and let the student bring his 1-4 tube and fixtures, and rent a small room to make experiments in, and make his studies from, when not attending lectures and school, and bring his results before his class and professors, and thereby get the practical part of photography; and, if prepared, when the term is through, to receive his diploma and go to work; and, by having that, it will give to his patrons confidence in his ability, and to him the assurance of success. By the help of such a Photographic College and his diploma, he will possess art character and tone, and a higher money value can be commanded for his work.

This is what is most needed to give our art the distinction that it requires, to place it by the side of the other fine arts, and by not having it, we lose each day in dollars and cents; besides the greater loss in the higher standard.

MR. CARVALHO.—I move you, sir, that this paper be received, and that a committee of three, to take the gentleman's suggestions into consideration, be appointed by yourself to report here sometime to-morrow; and I think the gentleman who read the paper should be made chairman of that committee.

Seconded, and carried unanimously.

MR. MOSHER.—I have another communication I would like to read, and I feel there ought to be some action taken before this Convention adjourns; that is, for this committee to give its hearty indorsement towards taking some definite action towards having a *Photographic Protective Life Insurance Company* established, by each member paying \$5.00 into the treasury to become a member, as a sinking fund; from which to draw \$1000, if any one of the members die, to be given to their widow, if a married man; or, if a single man, to his nearest relation; or to whom he may designate if he should make a will; and let this allow the employees of our establishments to become members. And I would like to know how many there are here that would pay their \$5.00 within the next sixty or ninety days, and become members of the Photographers' Protective Life Insurance Co., and for us to see how many we can get to join us from all those that have stayed at home, and to report to a committee

of three, who may be appointed by this Convention, within the next sixty or ninety days; and if enough members are reported to warrant the committee to go ahead and get the charter *at once*, and have a Photographic Life Insurance Co. established in running order by January 1st, 1881, so that if any one of us die, who is a member, our families will at least have \$1000 to keep them from want.

MR. BANKES.—As at least two-thirds of the members have left the hall, I move that the paper be laid on the table until to-morrow morning, to be taken up then.

MR. CARVALHO.—I would suggest that you appoint that committee at once, and if it be in order for me to suggest the names—

THE CHAIRMAN.—Yes.

MR. CARVALHO.—Then I would suggest Mr. Mosher, Mr. Wilson, and Mr. Fitzgibbon.

MR. WILSON.—I must beg to decline. I cannot give it time, sir. I am taking the proceedings, and I cannot leave my desk.

THE CHAIRMAN.—The members for that committee will then be, C. D. Mosher, D. M. Carvalho, and T. M. Bankes.

MR. CARVALHO.—I must beg to be excused from that committee; I have a great deal to do for to-morrow, and I cannot give it time; my heart is good, but my time is taken up. Mr. Pitman, from Springfield, I think would serve.

THE CHAIRMAN.—Then I will appoint Mr. Pitman to substitute Mr. Carvalho. Before we adjourn, I desire to read a telegram from St. Louis:

To C. CRAMER,
Chicago, Ills.

Photographers here send greeting to National Convention.
AUGUST 25TH, 1880. W. J. HAZENSTAB,
St. Louis, Mo.

The Convention then adjourned to meet at 9 A.M., Thursday.

(To be concluded in our next.)

PROCEEDINGS OF EXECUTIVE COMMITTEE OF P. A. OF A.

A MEETING of the Executive Committee was held August 27th, 1880, at 12.30 o'clock, at the store of Douglass, Thompson & Co., 229 and 231 State Street, Chicago; present,

Messrs. Carbutt, Douglass, Ryder, and Wilson.

On motion of Mr. Douglass, Mr. J. F. Ryder was chosen as Chairman of the Committee, and Mr. Edward L. Wilson as Secretary, and these gentlemen assumed their duties.

The matter of facilities, and the expense of the future meeting of the Association, were the subject of consideration and discussion.

Without any definite action, it was resolved to bring up the subject again at the next meeting.

On motion, adjourned, to meet at the call of the Chairman.

EDWARD L. WILSON,
Secretary.

TO THE MANUFACTURERS OF DRY PLATES.

THE committee which was appointed by the Photographers' Association of America to try all dry plates submitted to them, wishes that the plates would be sent to each of the committee separately, and in the following way: size, 8x5; if two grades of rapidity, half a dozen of each, and every plate should be wrapped separately in non-actinic paper, and then each half dozen of one grade together; the formula for the developer, and other points of manipulation, should accompany each package, and the approximate time should be given; and, lastly, all plates should be in the hands of the committee by September 25th. This will allow us about time enough to test the plates and report to the journals by October 15th.

As a full meeting of this committee was not possible to be had, and as it is desirable to have this notice in the first journals after the meeting of the Photographers' Association of America, the time will not permit to communicate with all the members of the committee. I will, therefore, suggest to the committee the following mode of working: I will, in each instance, make a wet plate first, and note the exact time, and then follow with one plate of each brand, according to the directions given. My whole aim in this test will be to strictly observe and note what, to my understanding, the

intention was when the Photographic Association of America appointed this committee, namely, to determine to what degree of practicability the dry plate can be utilized in every-day work, in the gallery, and outdoors, and also which of the divers plates in the market are the most practical for this purpose.

It was the original idea of the undersigned (the chairman of this committee), that it might be more satisfactory to all interested, if the plates would come to each member without knowing the manufacturer; but, on a second thought, I find, to arrange this mode, it too complicated; and I, for one,—having only the desire to perform my duty, imposed upon me by the Photographers' Association of America, and having no personal interest in this trial except to find the best dry plate, which I will hereafter adopt,—am perfectly willing that my report shall go before the public as having made my trial with open eyes, believing that when a committee of five was selected to serve a body of intelligent men numbering over two hundred and fifty, it is apparent that impartiality and fairness are expected.

As the Photographers' Association of America did not select any particular journal for its organ, I send this for insertion to all journals known to me—the *Philadelphia Photographer*, the *St. Louis Practical Photographer*, and *Anthony's Bulletin*, New York.

The following are the names and addresses of the members of the committee
T. M. Schleier, Nashville, Tenn.; Henry Klauber, Louisville, Ky.; Edward Bierstadt, New York; R. Benecke, St. Louis, Mo.; T. W. Guering, St. Louis, Mo.

T. M. SCHLEIER,
NASHVILLE, TENN. Chairman of Committee.

AN AFTER ADIEU.

CLEVELAND, O., August 30th, 1880.

TO MY FRIENDS OF THE P. A. OF A.:

Having reached home in good order, my thoughts drift back to Chicago and the good time we had together. I feel like calling back to you another pleasant "adieu," and charging you to keep in mind, every month

and every week, the pleasant and profitable gathering we are bent upon for next year. Let us begin to scrape for it *now*.

Yours truly,

J. F. RYDER.

CONGRATULATORY.

It is with feelings of pride and gratitude that we congratulate the fraternity upon the successful inauguration of a new national society. The attendance was larger than is usual for organizing such associations, and the harmony and fraternal feeling specially marked. A very large number of representative men of our art-science took a deep interest in the business of the Convention, and will give added strength by their future efforts to aid the society. It could not be expected that much could be done aside from the dry work of effecting a proper organization at this first Convention, but we think all who came were satisfied with what little was offered in the way of papers, discussions, and the exhibit of work. Next year, and succeeding years, it is expected that the Convention will be devoted to the high purpose of education, and the sessions will be full of valuable and instructive papers, illustrated lectures, the discussion of all topics interesting to photographers, and the exhibition, mostly in portfolios, of the work done during the year intervening between the dates of convention. The initial gathering counted over three hundred, and at the coming meeting, a year hence, we want at least a thousand; double this number should come. It is hoped that every photographer will join in the great work before us, and do what they can to further the object of the Association.

Talk for it, write for it, study for it, and begin now to prepare your exhibit. If you need to economize to go when the time comes, now is the hour to commence your savings. Read the journals; know just what is going on in the world of photography; learn from month to month what the officers of the Association are doing for you, and be prepared to mingle among the united craft in convention as a *live* photographer. In doing this work you will grow intellectually and financially, and add a great deal towards

raising the standard of your profession, which lifts you higher as it grows. We feel that all who, either from choice or circumstances, were absent from this Convention, will, when they read the full proceedings in our journals, regret they were not of the number that, in the most fraternal and heartiest manner, launched the new society, and will atone for their shortcomings by added zeal, and doing noble work for the Photographers' Association of America.

G. A. DOUGLASS,

CHICAGO, August 31st, 1880.

Secretary.

SOCIETY GOSSIP.

ASSOCIATION OF OPERATIVE PHOTOGRAPHERS OF NEW YORK.—The last meeting of this Association was held at Beethoven Hall, July 7th, 1880, President Ch. Hendrickson in the chair.

Communications from J. F. Ryder, of Cleveland, O., and W. Milliken, of Monticello, N. Y., inquiring for assistants, were read, and the Secretary instructed to answer.

The *Philadelphia Photographer* and Anthony's *Bulletin* for June were received. The *Philadelphia Photographer* has, like the *Bulletin*, placed the Association on its list of subscribers; besides, the Association received from the *Philadelphia Photographer* a number of books, to form from them a nucleus of a library, for all of which the Association tenders most sincerely thanks to the above-mentioned journals.

Mr. Edward Boettcher, a well-known operator, was, by suspension of Article I, Section 2, of the By-Laws, at once elected to membership.

Mr. Ehrmann proposed for membership Mr. A. Esselborn, retoucher and operator; Mr. G. Mahn, printer. Mr. Atwood proposed Mr. William Drake, printer.

By motion of Mr. Atwood, it was resolved to appoint a Literary Committee of three, representing the three prominent branches of the profession respectively, and whose duty it shall be to inform themselves of all improvements, as practically, or by reading communications before them, and report, with their remarks, to the Association.

The Committee appointed are: Mr. Chas.

Coffin, operator; Mr. J. Atwood, printer; Mr. J. Zahner, retoucher.

Mr. Atwood exhibited "Todd's vignette-printing attachment." It received the approbation and admiration of all operators and printers present.

Query by a Member.—"It often occurs to me that, by redeveloping a negative after fixing, the parts not acted upon by light will cover with a purple deposit as soon as the process of redeveloping takes place. What is the cause of it?"

Mr. Boettcher thinks a hasty manipulation will cause such effects. Very high or very low temperature will do the same. He never had the trouble himself, but is acquainted with it. Very weak redeveloper and proper care are his remedies.

Mr. Ch. Coffin is well acquainted with the trouble. A plate freshly exposed will never show it. If the plate has stood a length of time since its removal from the bath, it is liable to give the deposit by redeveloping, even before fixing. Temperature must be evenly balanced in all operations. Unfortunately, operators cannot always do so.

MR. KUTSCHER.—In high temperature, we always try to keep our collodion free from halogens. If you will work with a straw-colored collodion, and you are compelled to redevelop, use any organic acid (citric, tartaric) in your developer unsparingly.

"What progress has photography made, technically, within the last ten years?"—a question propounded by a member—was answered by Mr. Coffin. He said: "I believe I can answer your question in the same *animus* in which it has been put. Technically, photographic operations and manipulations have not been changed materially within my recollection. I must say, however, that we have learned to handle our chemicals to better advantage; that we have vastly improved in posing and lighting our subjects; and that we have, by experience, learned to get better negatives from inanimate objects. Judicious timing and developing are of importance. We do not see any more the cast-iron, black and white pictures we used to make formerly. With the same chemicals, the same objec-

tives, and under the same lights, we make better work now. We have learned to make better negatives. Retouching has been a great aid to our endeavors, and our printers have also wonderfully improved.

"Of the gelatin processes—undoubtedly in which the future of our profession is to be looked for—I am unable to give you any information."

Mr. Ehrmann presented to the Association the outlines of his opinion regarding progress. His paper was received with applause, and he was requested to prepare it for publication.

Adjourned to July 21st.

CH. EHLMANN,
Secretary.

Another regular stated meeting of this Association was held at Beethoven Hall, September 1st, 1880, President Hendrickson in the chair.

The minutes of last meeting were read, and, after correction, were approved.

The resignation of the Secretary was read and accepted.

Adjourned to September 15th, 1880.

A. H. ATWOOD,
Secretary *pro tem*.

OUR PICTURE.

WHO that looks at the subject of our illustration this month does not wish he were "a boy again," and "could go a fishing," not caring whether "school kept or not"? Who is not carried back to the days when, care-free, and perhaps playing truant from school, with well-filled bait-can, he started off for a fishing excursion?

"Tis afternoon—the fish do bite,"

seems reason enough for following out the sportsman's instinct that lies in the nature of every boy. The path leads where

"The tasselled maize, full grain, or clover,
Far o'er the level meadow grows,
And through it like a wayward rover,
The noble river gently flows."

How sweet to his ears the gurgling voice of the waters, the drowsy hum of the insects, and the faint rustle of leaves in the almost imperceptible breeze. Perhaps he

never heard of Tennyson, much less of his delicious song of the river that falls on ear and heart like the soft ripple of tiny waves.

"I wind about, and in and out,
With here a blossom sailing,
And here and there a lusty trout,
And here and there a grayling."

Of the last two lines he is thinking, though the sweetness of the first two are forced upon him unconsciously, and without knowing it their truth is the main cause of the pleasure of fishing.

He knows by experience *just* the spot where the fish are thickest, and, perhaps, there is a latent thought in his mind that a fine string of fish will turn aside the edge of the rebuke or punishment that awaits his return. Now he has found the place.

"There is a silent pool, whose glass
Reflects the lines of earth and sky:
The hues of heaven along it pass,
And all the verdant forestry."

Here is the fisherman's paradise. With shoes cast aside and pants rolled up, he dips his bare feet in the limpid waters while adjusting his bait and line, and then resigns himself to the delightful ease and repose of *fishing*.

Perhaps the scene is but little changed since the long-past days of the red man. Maybe this very spot was a favorite camping-ground of the lost tribes; here, perhaps,

"The old smoked in silence their pipes, and the young
To the pike and the white perch their baited lines flung;
Where the boy shaped his arrows, and where the shy maid
Wove her many-hued baskets and bright wampum braid."

Our little hero *may* have thought of these things, though it is more probable that his mind was on the present instead of the past, and when, at last, tired of his sport, he rises to go home, with an appetite sharper than his own fish-hooks, he finds his load of fish *very* easy to carry; easier, perhaps, than the weight on his own conscience. Never mind; he had good fun while it lasted, and if it was stolen pleasure, maybe it was all the sweeter. In any case, we can scarcely suppress a sigh

of envy, and wish again that we, too, could go a-fishing.

The four negatives used vary in composition, some representing our hero patiently "a-fishing," others showing him on the way. Mr. J. H. Watson, Detroit, Mich., made the negatives. They were not made specially for our use, but seeing prints from them, we asked this pleasure, and Mr. Watson amiably consented.

There is a great deal of feeling and nature in the pictures, and it would be pleasing if our photographers would practise more the capturing of the splendid home-subjects which are all around and about them.

The prints were made at the *Philadelphia Photographer* printing-rooms, on Mr. Genert's importation of paper.

AN ESSAY ON THE EDUCATION OF THE EYE

WITH REFERENCE TO PAINTING.

BY JOHN BURNET, F.R.S.

(Continued from page 232.)

CHIARO-OSCURO.

THAT harmony which is produced by the chiaro-oscuro, or by the means of black and white, independent of color, depends upon the quantities of light and dark employed, and the disposition of them; sometimes meeting in extremes of opposition, in other portions gliding away with imperceptible softness into undefined spaces, the light sometimes falling on combined objects, giving out a faint halo round the group; in some instances darting out through the dark masses of shadow in sharp defined shapes, creating by their whole arrangement that mixture of harsh and tender gradations observable in nature. The power of producing a variety of pleasing sensations upon the eye, mainly rests on the conduct of the chiaro-oscuro; objects are rendered either strong or delicate, according as they advance or retire on the perspective plane of the picture; parts are forced upon the spectator's attention, by their clear defined character, and assisted from contrast by groups of indistinct images imbued with the properties of middle tint. The quantities of dark that are to be allowed to interrupt or pass

within the boundaries of the masses of light, or the size of those portions of light which are found within the dominion of shade, either giving depth to it by contrast, or destroying its preponderance by producing a union with the light, are entirely at the guidance of the artist, whose skill is shown in the management of this difficult department, it being entirely under the influence of an educated eye; neither am I aware that its beauty is felt, unless by those whose tastes are refined by long contemplation of the finest works of those who have excelled in the different branches of painting. We know, as is the case in music, though the ear is capable of acquiring a knowledge of twenty thousand simple sounds, all differing in tone and strength, yet this power of distinction is not entirely in the construction of the organ, but arises from long observation. Sir Charles Bell says, "that this variety of sensation does not entirely depend upon the structure, but is the operation of the sense and intellect conjointly, appears from the long experience which is requisite to give this perfection. Nature is bountiful in providing the means of simple and acquired perception, but the latter is the result of long experience and continued effort, though we have lost the feeling of its being a voluntary effort."⁷

We have already noticed some of the most evident properties belonging to the application of shadow, by which we can easily perceive, that a mere outline of a group of figures, or a variety of objects, lies like a map under the eye; but by the judicious application of shadow passing amongst the several forms, they rise up, and assume their various situations according to their relative distances from the eye of the spectator. We can easily carry our imagination further, and assign a reason why some portions are to be subdued, and others brought into notice; but the art of combining the whole, in an harmonious mass of *chiaro-oscuro*, can be acquired only by long investigation into the principles of those who have excelled in this captivating and imaginative art. Before entering into an examination of this quality, so productive of pleasure, viewing its effects in painting, it will be necessary to examine its cause, and where it exists in natural

imagery, the only sure source on which we can build with certainty. When we direct our eyes to any particular object, we observe it distinctly defined, while the surrounding objects produce a fainter impression on the retina; we also perceive, on examination, that we often have been attending to the impression made upon one eye only, either from its more favorable position, or from a superior goodness in the organ itself; nevertheless, a number of lateral images are indistinctly hinted at upon the retina of the other, which, by their softness, give a precision to the object of our attention, from contrast, and amuse and assist the imagination from a variety of circumstances; we know, also, that there are two representations, one painted in each eye, and though they form but one in the mind, yet we cannot shut out entirely those hints which may be conveyed to the fancy from the faintest impressions unconsciously attended to; add to which, the eye, from fatigue in looking at any object attentively, naturally turns for repose to soft masses of shadow and indistinctness. Without following up this subject too minutely, these may be some of the reasons why particular arrangements of *chiaro-oscuro* please the eye more than others. We also find, that along with indistinctness, a repetition of form, and a completeness or unity of shape, are very much under its influence, as may be observed by trying an experiment as noticed in foot-note,* which will suggest others to the imagination. But whatever way the student takes to get an insight into this great charm of painting, either in arranging his composition so as to

* If we take a pen and sketch in a row of buildings, trees, etc., running from one side to a point of sight in the centre, blotting in shadows broad and dark on the near objects, and while the ink is wet fold the paper across the point of sight, so as to take off an impression on the opposite side, the eye is not only gratified by a greater mixture of sharp and soft portions, but by a greater unity, and balance of parts, one side with another, and a repetition of the sky-line with the lines of the ground; or if we draw in a group of trees and fold the paper across at the base of their stems, so as to take off a faint impression, as if reflected in water, the same agreeable sensation will be produced.

suit any particular effect of light and shade, or in trying various means of distributing

has it in his power; they ought to be viewed in every direction, to enable the eye to get

Fig. 1.



FIG. 43.

light and shade over his design, let him carefully watch, both in nature and in art, its various combinations, and endeavor to find

FIG. 49.



out the latent cause of its beauty. As the etchings of Rembrandt embrace this quality in the highest degree, from a mere outline to the most extensive depth of shadow, they ought to be constantly before him when he

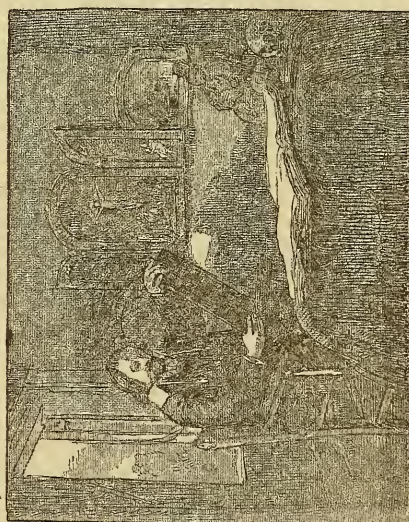
Fig. 3



FIG. 50.

acquainted with the proportions of light, dark, and half-tint; he ought also to engraft the scheme of chiaro-oscuro on designs of

FIG. 51.



his own, that the harmony which exists in these wonderful productions may be transferred, if possible, into new inventions, as in the above illustrations.

(To be continued.)

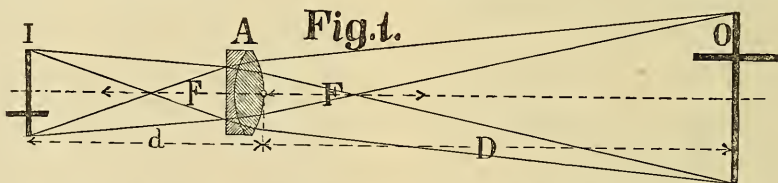
PROPORTION OF OBJECT AND IMAGE IN PHOTOGRAPHY.

BY JOHN W. NYSTROM, C.E.

It is not generally known among photographers how to set the camera-obscura so as to make an image of a definite proportion to the size of the object, which is often required in reducing objects to an exact scale. My attention has been called to this subject by difficulties in obtaining photographs of exact scales, and have found, when such are required, that the photographer measures the size of the object, and moves the camera-obscura forward and backward until he finds the image to be near the required size, which is a rule-of-thumb operation that cannot be relied upon for exactness.

The simplest and most correct method of procuring photographs of a definite scale is to first determine the distance of the optical centre of the lens from the object, then place the camera-obscura accordingly, and the image on the ground-plate will be of the required size or scale.

Referring to the accompanying illustration Fig. 1, rays of light passing from an object *O*, through an optical positive lens *A*, form two conjugate foci; namely, one at the object *O* and the other at the inverted image *I*. An erect object at *I* would form an inverted image at *O*. The distances *D* and *d* from the optical centre of the lens to the foci are in direct proportion to the sizes of the object *O* and image *I*.



The notation of letters in the formulæ correspond with the illustration Fig. 1.

F = principal focal distance of the lens or system of lenses.

d = conjugate focal distance to image *I*.

D = conjugate focal distance to object *O*.

I = size of the image.

O = size of the object.

All dimensions must be expressed by the same unit of measure, such as feet, inches,

or metres. The formulæ will answer for any system of measure.

$$\text{Principal focal distance } F = \frac{Dd}{D+d} \dots 1$$

$$\text{Image focal distance } d = \frac{DF}{D-F} \dots 2$$

$$\text{Object focal distance } D = \frac{dF}{d-F} \dots 3$$

$$O : I = D : d \dots 4$$

Insert the value of *d* formula 2, and we have

$$O : I = D : \frac{DF}{D-F} \dots 5$$

From this analogy we have

$$\text{Object focal distance } D = F \left(\frac{O}{I} + 1 \right) \dots 6$$

$$\text{Image focal distance } d = F \left(\frac{I}{O} + 1 \right) \dots 7$$

$$\text{Proportion of object and image } \frac{I}{O} = \frac{F}{D-F} \dots 8$$

$$\text{Size of object } O = \frac{I(D-F)}{F} \dots 9$$

$$\text{Size of image } I = \frac{FO}{D-F} \dots 10$$

The formula 6 gives the distance which the optical centre in the camera-obscura must be placed from the object, in order to produce an image of the desired size or scale.

Example 1. It is desired to produce an image or photograph of one-quarter the size

of the object with a lens of *F* = 12 inches focus. Required, the object distance *D*?

In this case *O* = 4, and *I* = 1.

$$\text{Object distance, } D = 12 \left(\frac{4}{1} + 1 \right) = 60 \text{ inches.}$$

Example 2. A photograph is to be three-eighths of the size of the object, with a lens of *F* = 10 inches focus. Required, the object distance *D*?

In this case $O=8$, and $I=3$.

Object distance $D=10\left(\frac{8}{3}+1\right)=36\frac{2}{3}$ inches.

The formula 6 will also answer for making the image larger than the object, namely :

Example 3. A drawing measuring $4\frac{1}{4}$ inches between two fixed points, is to be enlarged to $7\frac{3}{4}$ inches, with a lens of 13.5 inches focus. Required, the object distance D ?

In this case $O=4.25$, and $I=7.75$ inches.

Object distance $D=13.5\left(\frac{4.25}{7.75}+1\right)=20.9$ ins.

After the camera-obscura is set to the correct object distance, the image is focussed by moving the ground-plate, and it becomes the desired size.

The following table is calculated for different proportions of object and image, with focus $F=1$, and also with $F=8\frac{1}{2}$ inches focus.

The distances in the centre columns D and d , multiplied by whatever focus of the lens, give the object and image distances corresponding to the desired proportion of object and image.

Example 4. A photograph is to be three-sixteenths of the size of the object, with a lens of 9 inches focus. Required, the distances D and d by the aid of the table?

In this case $O=16$, and $I=3$, which in the table correspond with

Object distance $D=9 \times 6.3333=57$ inches.

Image distance $d=9 \times 1.1875=10.6875$ inches.

The table can also be used for making the image larger than the object by reversing the columns O and I .

Example 5. A picture is to be enlarged from 11 to 16 by a lens $9\frac{1}{2}$ inches focus. Required the object and image distances?

In this case $O=11$, and $I=16$, which in the table correspond with

Object distance $D=9.5 \times 1.6875=16.23$ inches.

Image distance $d=9.5 \times 2.4545=23.32$ inches.

It is not necessary to calculate the image distance which is focussed by the ground-plate; but the calculation, however, serves as an approximation for fixing the ground-plate in the right position.

After the optical centre is set to the cor-

rect object distance, the focussing-screw should not be operated or touched.

PHOTOGRAPHIC PROPORTIONS.

Proportionate Sizes of		Focus $F=1$. Distances to		Focus $F=8\frac{1}{2}$ ins. Distances to	
Object O .	Image I .	Object D .	Image d .	Object D .	Image d .
				Inches.	Inches.
1	1	2.	2.	17.	17.
2	1	3.	1.5	25.5	12.75
3	2	2.5	1.6666	21.25	14.165
3	1	4.	1.3333	34.	11.3333
4	3	2.3333	1.75	19.875	14.875
4	1	5.	1.25	42.5	10.625
8	7	2.143	1.875	18.215	15.9375
8	5	2.6	1.625	22.1	13.912
8	3	3.6666	1.375	31.2333	11.6875
8	1	9.	1.125	76.5	9.564
16	15	2.0666	1.9375	17.573	16.46875
16	13	2.2307	1.8125	18.961	15.406
16	11	2.4545	1.6875	20.683	12.154
16	9	2.7777	1.5625	22.610	13.281
16	7	3.2857	1.4375	27.943	12.2187
16	5	4.2	1.3125	35.7	11.15625
16	3	6.3333	1.1875	53.833	10.09375
16	1	17.	1.0625	144.5	9.03125
10	9	2.1111	1.9	17.9444	15.39
10	8	2.25	1.8	19.125	15.3
10	7	2.4285	1.7	20.642	14.45
10	6	2.6666	1.6	22.733	13.6
10	5	3.	1.5	25.5	12.75
10	4	3.5	1.4	29.75	11.9
10	3	4.3333	1.3	36.833	11.06
10	2	6.	1.2	51.	10.2
10	1	11.	1.1	93.5	9.35

Photographers ought to calculate a table of this kind for each lens of their camera-obscura, as has been done in the last two columns for a lens of $8\frac{1}{2}$ inches focus.

To find the Principal Focal Distance and Optical Centre of a Lens, or of a System of Lenses.

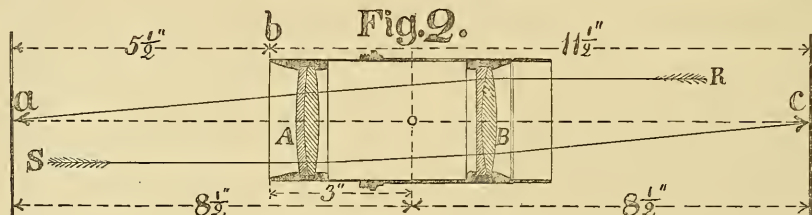
The principal focal distance of a lens must be measured from a clear image of an object at an infinite distance off, like that of the sun or moon. If the image is taken from an object at a short distance, the principal focal distance must be calculated by formula 1.

The principal focal distance is measured from the optical centre to the image of an object at an infinite distance off.

Camera-obscuras have formerly been made, and are yet used, with only one achromatic, plano-convex lens, in which case the optical centre is on the vertex of the convex surface of the lens, which side is turned towards the object, and from which the object distance is measured.

Camera-obscuras are now generally made with two compound lenses, *A* and *B*, placed at a distance apart in a tube, such as made by C. C. Harrison, of New York, and represented by the accompanying illustration Fig. 2.

The principal focal distance, and the optical centre of this or other similar combinations of lenses, are found in the following way:

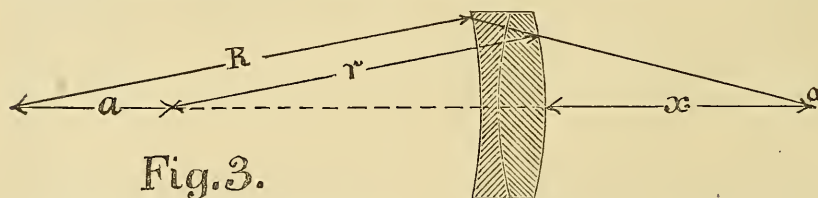


Place a flat surface, *a*, at right angles to the sun's rays; then place the tube with its axis pointing towards the sun, for taking a

To find the Optical Centre of a Meniscus.

Lenses for camera-obscuras are often made in the form of a meniscus, that is, a concavo-convex lens, having the radius of curvature of the concave side greater than that of the convex. Achromatic lenses of this kind, as represented by Fig. 3, are made by Ross, of London. Mr. J. Zentmayer, of Philadelphia, has also made meniscusses for photography.

For a positive meniscus, the optical centre *o* is always outside of the convex surface, as represented in Fig. 3.



sharp focus image at *a*. Measure the rectangular distance from the surface to some definite point *b*, on the tube, which by one of R. Newell's tubes was found to be $5\frac{1}{2}$ inches. Turn the tube for focussing another image from the other end, but on the same surface, and measure the rectangular distance from *c* to the same point *b*, which was found to be $11\frac{1}{2}$ inches.

The sun's parallel rays *R* form the focus at *a*, and the rays *S* form a focus at *c*.

The principal focal distance of the combination will then be $\frac{1}{2}(5\frac{1}{2} + 11\frac{1}{2}) = 8\frac{1}{2}$ inches. The optical centre from *b* will then be $\frac{1}{2}(11\frac{1}{2} - 5\frac{1}{2}) = 3$ inches, marked *o* in the tube. It is from this optical centre the object and image distances must be measured.

Opticians who furnish the camera-obscuras ought to mark on the tube the principal focal distance and optical centre of the combination. A table of photographic proportions should also be furnished by the opticians for each camera-obscura.

R = radius of the concave side.

r = radius of the convex side.

a = distance between the centres of the curves.

x = distance from the convex surface to the optical centre, *o*.

$$x = r \left(\frac{a}{R - r} - 1 \right)$$

Example 6. A meniscus of *R* = 2.5 inches radius of the concave surface, *r* = 2 inches radius of the convex surface, and the distance between the centres is *a* = 0.85 of an inch. Required the distance *x* from the convex surface to the optical centre *o*?

$$\text{Distance } x = 2 \left(\frac{0.85}{2.5 - 2} - 1 \right) = 1.4 \text{ inches.}$$

The optical centre of a meniscus can also be found by focussing the sun's image from both sides of the lens, as before described.

PROF. VOGEL'S NEW EMULSION.

TRANSLATION OF THE ORIGINAL LETTER
FROM DR. EDER ABOUT HIS EXPERI-
MENTS WITH IT.

SOME few days ago, I obtained, from Prof. Vogel, the first sample of his new emulsion received in Austria. It is only semi-liquid at the usual temperature, but, by a short immersion in warm water, it becomes entirely liquid.

The emulsion was tested in the military *atelier*, in the presence of its director, Captain Pizzighelli. It appears to be dissolved in alcohol and acetic acid, and is, like collodion, poured upon plates prepared with a solution of caoutchouc or chrome-alum, then allowed to drain off again, and, after congealing,—which takes about two minutes,—dried in a perpendicular position. The emulsion flows well (about like four-percent. collodion), and the preparation offers no difficulties. The moist plates are transparent, but, after drying,—which takes place in about an hour, at a temperature, in the room, of 18° C.,—they become opaque. The layer appears mat and deep yellow.

In several experiments, we found a high degree of sensitiveness in the emulsion of Vogel we experimented with, which comes very near the gelatin plates in this point. For developing, the pyro and ferro-oxalate developer can be used. The picture appears somewhat slower than in gelatin plates, and the negatives obtained are rich in details and fully brought out. If the developer is not well proportioned, a deficiency of contrasts is met with. In developing with iron, this occurrence is very little noticed.

A great advantage of Dr. Vogel's emulsion consists in the fact that, even with long protracted developing, the brighter, lighted parts of the picture do not become necessarily hard, as in too-much-developed gelatin plates, but, on the contrary, the picture is developed harmoniously, and becomes softer. The fixing is done rapidly. After the fixing and thorough washing, one may intensify either with mercury or silver.

Vogel's plates, as long as they are wet, take the silver, intensifying very easily, without forming red fog, which is of very

great value. The drying, after fixing, goes very fast.

The plates, as long as they are moist, stand in about the same relation to mechanical disturbances as collodion plates; but, after they are dry, they have more resisting power than gelatin plates, and can easily stand any lead-pencil retouch. Nevertheless, they must be varnished, because the layer is not quite smooth after the drying; but all the other dry plates require also a coat of varnish, be it only to prevent the turning dark with time, in printing with the silvered albumen-paper.

In Vogel's emulsion, we meet, at the first time, a serious and dangerous rival of the gelatin emulsion, especially as the handling of the former is much easier.

To all appearances, Prof. Vogel has very happily combined the collodion and gelatin emulsions.

FRENCH CORRESPONDENCE.

On the Abuse of Patents, and of the Absolute Inutility of most of those recently taken in France for Photographic Inventions—Bad Effects of Heat for Photographic Work in which Gelatin is Used—Reversing Gelatino-bromide Negatives, Process of Mr. Chardon—New Developer for Gelatino-bromide Plates—General Treatise on Photography by Dr. Von Monckhoven—Reversing Images by a Prolonged Action of Light, by Mr. Jansen.

FRENCH legislation in the matter of inventions will give a patent to any one who may apply for it, without regard to the nature of the object, or even of the thought which it is desired to patent. Of these it takes no account, and it is at his risk and peril that an inventor, or a pretended inventor, takes out a patent, which is given to him upon simply paying the cost of the first annual payment. The government takes the money, and guarantees no privilege; it is for the patentee, if he believes in the priority of his claim, to make his rights known, to defend them in the courts, and to make the best use he can of them. Although it is distinctly stated that patents are only given with the express reservation that they are not guaranteed by the government, there

are persons who, abusing of public credulity, or rather of the ignorance of the greater number, take out patents for almost anything, and loudly proclaim, "our article is patented!" as if this was in any manner the proof of a veritable invention; as if the name of patent carried with it a certificate of novelty and usefulness.

Pardon us this necessary introduction to what we have to say about photographic patents. We read with attention the specifications of all the patents taken out in France for photographic inventions. We would, naturally, expect to find in these descriptions a number of new and interesting facts, even if we do not find any important discoveries, and we are struck with the profound ignorance of a great number who, to obtain a patent which they can never make profitable, are ready to pay one or several annuities of twenty dollars into the government coffers. If there ever was a tax based on ignorance and vanity combined, we must look for it here, whilst blaming, at the same time, the legislation which refuses, as is customary in other countries, to investigate the value of the object to be patented, and the right of priority. It seems to us that there might be two degrees: the first implying the absence of all guarantee; the second showing the careful examination by a commission of competent persons, who would decide if the invention really existed. The moral guarantee given by the judgment of this commission would be a certain guide for the public, who could thus discriminate among the number of patents which have been given, whether deserving or not.

Thus we have just seen a patent for the interposition of a net-work between the negative and the sensitized sheet; a method of sizing tissues either for painting or the transfer of photographic prints; a new method for applying colors to photographs (which consists in painting them as always has been done); a process of painting photographs on canvas, styled "lineography;" a special preparation for obtaining photographs on textile materials, and many others besides, too numerous to mention, possessing but little utility. In all this there is nothing new, nothing ingenious, and we feel tempted to send back to school all these

pretended inventors, whose ignorance is manifested in each word of their specifications.

It is well to remark, also, what few practical results come from these patents. Who uses them? what do they produce? Nobody will ever know. The most important result seems to be to enable the patentee to affix the word "patented" to his process, in too many cases another word for *catch-penny*. This brings me to speak a word about those inventions which, although worthy of the name, are not necessarily usefully patentable. Thus Mr. Despaquis has taken out a patent for a phototypy process, which consists of the double exposure, through a glass plate, of the sensitized film formed from a double coating of albumen and bichromatized gelatin. Albert, of Munich, as is well known, pointed out exposure through the plate to give solidity to the first coating of bichromatized gelatin. Despaquis arrived afterward, and pointed out the utility of a second exposure for the better cementing of the gelatin to the albumen—this last exposure taking place by the back of the plate, and after the impression of the image through the negative. If his patent has no other object than to fix a precise date in view of a claim of scientific priority, we can see no objection to it; but, if armed with this legal privilege, he would prevent any one from placing his phototypic plates on one side or the other in his glass-room, and to cause the light to act on the back one or several consecutive times, it is here that he will meet with a very great practical difficulty. In such a case it would be better to refer the matter to a learned society, or to a publication in a special journal, so as to be enabled to show the right to the priority if it ever came to be contested. But to spend annually twenty dollars, and this for fifteen years, to become the owner of a privilege of so illusory a character, it is really not worth the while.

As might have been expected, the great heat now reigning has disturbed photographic operations based on gelatin. Complaints and requests for advice come to us from all quarters; some are troubled in their carbon work, others can produce nothing good in phototypy, their plates become sticky

and will not print. It must be admitted that the gelatino-bromide negative process is the cause of much disappointment.

There is one recommendation which may be laid down as a principle, namely, to use, if possible, a cool cellar for making the greater number of the operations. In the carbon process the mixtion paper should be sensitized there; in phototypy the plates should be placed there to be soaked, in order to free them from the bichromate of potash; in the gelatino-bromide process the development should be made there, for fear that a too warm developer should remove the film. The use of baths cooled by ice has been recommended; but it is not always easy to procure ice, and it is often a costly product; it is much cheaper to work in the cellar. In regard to gelatino-bromide, the gelatin coating should be covered with a coating of normal collodion, the raising, and especially stretching, of the print will thus be avoided. Immersion, previous to development, in an alum bath, will counteract with success the action of a developer that is too warm. In temperate regions the modes of operating, in spite of a temporary elevation of the normal temperature, abound, and there is no necessity for interrupting work, but we must admit that the difficulties become much greater in hot countries, where, for practical work, it would be well to adopt those processes which have less to fear from an elevated temperature. The collodion emulsion is, in our opinion, preferable to the gelatino-bromide, which can only be used in the carbon, photoglypty, and phototypy processes, in exceptional conditions for working it.

The question of reversing negatives is attracting much attention. It appears that the different processes, up to the present time, have not proved successful when applied to gelatino-bromide negatives. Mr. Chardon advises, in order to successfully reverse negatives by removing the pellicle, to first cover the plates with a coating of normal collodion, and it is upon this coating that is to be spread the gelatin emulsion. This being done, place on the gelatin coating a new coating of the same normal collodion as that which has served to form the first isolating film. Now develop, and, after fixing, nothing remains to be done but to cut all around the

film which is on the glass, and, taking hold of one of the corners, raise the pellicle with a continuous movement.

It results from these observations that manufacturers of gelatino-bromide sensitized plates would do well to prepare plates suitable for reversing, and on which a coating of bromized gelatin is confined between two films of normal collodion. The cost, naturally, would be a little higher, but there would be a great advantage in being able, when returning from an excursion, to transform all our clichés into pellicular negatives. A practical detail of some importance is to avoid, when developing, to have the lower film of collodion to raise up; care should be had, before applying it, to coat a narrow strip all around the plates with a varnish of caoutchouc dissolved in crystallizable benzine.

Our learned colleague, Dr. Van Monckhoven, has just published the seventh edition of his general treatise on photography. This new edition, which is very elaborate, contains a complete and truly practical description of the gelatino-bromide process.

Mr. Jansen, of the Institute, thinks that he can successfully apply to his work in astronomical reproductions the well-known fact of the reversing of photographic images by the prolonged action of light. We have all remarked, without being able to explain it, that over-exposure of an image will change it from a negative to a positive. Mr. Jansen, to whom this fact was new, as he calls it a discovery, has conceived the idea of utilizing this phenomenon when he wishes to reproduce luminous bodies,—the sun, for instance. From a forced over-exposure in view of the luminous intensity of the celestial body to be reproduced, he claims the advantage of the conversion of the image into a positive, and the possibility of reproducing either the solar chromosphere or other solar phenomena, which, up to the present time, it has been almost impossible to photograph. He also hopes to be able to get a nearer insight into the mystery of the theory of photographic impressions.

LEON VIDAL.

PARIS, August 1st, 1880.

PLEASE read our advertisements—all.

GERMAN CORRESPONDENCE.

New Researches on the Quality of Gelatin—The Detaching of the Layer of Gelatin in Developing—Gelatin Plates for Reproductions—Action of Different Developers upon Gelatin Plates—Eder's Developer for Over- and Under-exposed Plates.

WE are again indebted to the indefatigable Dr. Eder—who not alone works faithfully himself, but knows also how to make others join in the battle of advancing photographic science—for a number of highly interesting publications bearing on the gelatin process, and the latest improvements in relation to the production and the use of gelatin emulsions, which tend much to elucidate many points hitherto not well understood. First, some remarks on gelatin paper.

According to Hofmeister, gelatin is reduced to two separate substances by being boiled long—semi-gluten (precipitated by chloride of platinum, insoluble in alcohol) and hemi-collin (not precipitated by chloride of platinum, and soluble in alcohol). Through this division, the gelatin becomes uncongealable. A similar effect is produced when the gelatin is kept warm—at 30° to 50° C.—for an extended period. Semi-gluten reduces nitrate of silver, and, most probably, also bromide of silver, in presence of ammonia. The division of the gelatin into the two separate substances is accelerated by the presence of ammonia. With extended warming, a process of putrefaction begins, in which ammonia, volatile sebatic acids, glyccocoll, peptone, and carbonic acid are formed. Ammonia remains combined with sebatic acid in solution.

In my last letter but one, I referred to the development of ammonia from gelatin by extended warming; but, according to Recht's experiments, this does not always take place. Recht subjected twelve kinds of gelatin, as he found them in the market, to a test. Of these twelve kinds two were alkaline (Nelson's and Fischer & Schmidt's), and they discharged ammonia after three to four days of warming. The other kinds of gelatin of the market were weakly acid, and developed no ammonia after two weeks' warming of the solution, with the exception

of one kind, from Fischer & Schmidt, which developed ammonia after nine days.

Eder recommends the following:

1. The gelatin, for methods of emulsification without ammonia, ought to be acid; for methods with ammonia, the reaction is immaterial.

2. Common lichtdruck gelatin may be used, the one which gives the clearest and hardest gelatin, and absorbs the least water, being preferable. In regard to sensitiveness, no material difference is noticeable in employing hard or soft gelatin.

3. The gelatin must be free from fat. Fat causes breaks in the layer, and light specks, with indistinct margin. By using ammonia, this defect is avoided.

The curling or detaching of the layer is most observed in layers which have been poured on thick, in using gelatin absorbing much water, after long digesting, and when gum-arabic is present. Eder recommends as a remedy for this defect the bathing of the plate in a solution of alum before developing. I successfully used alum in the developer, *i.e.*, 2 c.c. chrome-alum (1:50) to 100 c.c. developer. More alum is not advisable. An addition of 10 c.c. solution (1:10) to 100 c.c. developer prevents the development entirely.

In regard to the expansion of the gelatin layers and their usefulness for reproductions, Eder and Pizzighelli declare that only bad gelatin emulsions stretch much; while layers of undecomposed gelatin emulsion, adhering tightly to the glass, do not show any expansions injurious in any way to the exact reproductions. The running together of the fine lines in reproductions with gelatin plates takes place, according to Eder, only in presence of fog.

I mentioned, in some of my last letters, my new emulsion; and now Dr. Eder has published, in the *Photographische Correspondenz*, the result of his experiments with the same. (See page 285.)

The new plates, which I believe will be rapidly introduced (M. B. Vogel, in Leipzig, manufactures the emulsion already in wholesale), have only one common point left with the gelatin plates until now in use, *i.e.*, the development, and all the experiences gathered about the development of the gela-

tin plates, retain their value in the new process. Of course, it may be expected that upon different gelatin plates the same developer will often give very different results, so that from the favorable effect produced by one developer upon plates of one certain manufacture, no conclusion can be drawn concerning its effect upon plates of another manufacture. This fact became most obvious to me in experimenting with the prussiate-of-potash developer. I used the same first with Wratten & Wainwright's plates of moderate sensitiveness, and was much surprised to obtain such extremely strong negatives, that intensifying was entirely superfluous. With plates of German manufacture, I did not always obtain the expected strong plates.

Besides the prussiate-of-potash developer, Edwards' glycerin developer has been recommended lately. I tested, among others, these three developers, upon gelatin plates from Wegner & Mottu, of Amsterdam, with the following result:

Bromide of Potassium (1:10), .	1 c.c.
Pyrogallie Acid(1:10), . .	2 c.c.
Water,	100 c.c.
Ammonia,	5 drops.

The common developer produced the same degree of sensitiveness as the glycerin developer.

A.—Pyro,	1 gramme.
Glycerin,	1 “
Alcohol,	6 grammes.
B.—Bromide of Potassium, .	1 gramme.
Ammonia,	8 grammes.
Glycerin,	8 “
Water,	48 “

Equal parts of A and B are mixed, and the whole diluted with fifteen times the quantity of water.

The glycerin developer, however, produced perfectly clear and transparent shades, while the common developer gave shades with a yellowish color mixed in, which, of course, was very prejudicial to its clearness. The prussiate-of-potash developer did not work with more intensity, but certainly with more sensitiveness, upon Wegner & Mottu's plates; so that the prussiate-of-potash developer produced the same effect, after five seconds' lighting, as the two other

developers did after six seconds' lighting, and, at the same time, it showed the same clearness of the shades as the glycerin developer.

Now, Wegner & Mottu recommend to use an extraordinarily strong developer for their plates (100 c.c. water, 6 $\frac{3}{8}$ pyro, 55 drops ammonia, 12 drops bromide of potassium 1:10); and I have tested this developer also, besides the above-mentioned other three developers. The result was a very rapidly developed picture, which, however, just as rapidly disappeared again almost entirely under a strong fog. In spite of the rapid development, the details of the picture were not more apparent, as in pictures developed with the usual developer.

Furthermore, I tested the prussiate-of-potash developer and Eder's developer (ferro-oxalate) upon my new emulsion plates, and found that the first one produced good results only upon some plates, while the other sometimes worked hard.

Recently, Eder published an improved process of developing, which tends to make his ferro-oxalate developer, for over- and under-exposed negatives, very effective.

Take three volumes of a solution of oxalate of potassa (in cold condition, concentrated; therefore, about 1:3 strong) and one volume of a solution of sulphate of iron (also 1:3 strong*), but do not mix at once; but, in the case of a possible over-exposure, begin first the development with a solution of oxalate of potassa, to which one or two cubic centimetres of the solution of iron are only added at first.

With this weak developer, the development is begun, without bromide of potassium at first. If the plate be much over-exposed, the picture will appear at once in all its details, without fog, and very strong. If sufficient details are in the shade, and the picture is not yet strong enough, some drops of a solution of bromide of potassium (1:10) and some more iron are added.

Plates thus developed with a weak de-

* This proportion Eder calls, in his method, the normal one. The oxalate of potassa must not react alkaline, or it will form fog; but, on the other side, it must not contain too much free acid, or the developer becomes dull shortly after the mixing.

veloper, without bromide of potassium, are clear, but thinner, weaker, and more uniform than when treated with a strong developer with bromide of potassium; the latter are certainly clear, too, but stronger in the contrasts, thicker, and harder—sometimes too hard.

If the plate does not become well developed with the weak developer, gradually more and more iron is added, and finally, if necessary, the whole quantity measured off is added. If the exposure was not too short, the development will be finished in from three to five minutes. Strength, clearness, and contrasts are developed by bromide of potassium. The less sensitive plates very often need no bromide of potassium at all, as otherwise they are apt to become too hard. With sensitive plates, however, more or less of it must usually be added, in order to make them clear and strong.

In this way, with an exposure twenty times too long, just as good a negative may be obtained as with correct exposure. Of course, in under-exposed plates, difficulties will be met with the oxalate developer; but this occurs just the same with the pyrogalllic-acid developer. Eder uses, in such cases, an especially strong iron developer, and he always has on hand a very strong solution of oxalate of iron, which he prepares in the following manner:

In a porcelain vessel, 50 to 60 grammes neutral oxalate of potassa, in 100 c.c. water, are heated, and when it has been dissolved, 17 to 20 grammes crystallized sulphate of iron are added, which latter very rapidly dissolves under energetic stirring, and if the solution is kept sufficiently hot, much faster, in fact, than the precipitated ferro-oxalate. When all has been thoroughly dissolved, the dark-red solution is poured into a well-closed bottle, and left alone for twenty-four hours. In cooling off, a considerable quantity of sulphate of potassium crystallizes, but no active oxalate.

A developer obtained thus contains twelve to thirteen per cent. real oxalate of iron, or about twice as much as in the mixed normal developer, or in any other boiled oxalate developer. It is consequently much darker, and works with more energy. This developer is filtered, and kept in a well-closed

small bottle, which must be quite full. In this way, it may be kept for months, and a considerable quantity of it may be manufactured at once.

If the plate does not develop in five to ten minutes with the common developer, pour it off, and put instead of it the lastly-described,—the strong developer in the vessel,—and place the plate into it without rinsing it at first. If fog is formed, which is noticeable already with the first developer, more or less bromide of potassium is added, according to the strength of the fog.

These two above-described developers obviate the main objection which has always been made against the ferro-oxalate developer, namely, its inappropriateness for over- or under-exposed plates.

Very truly yours,

DR. H. VOGEL.

BERLIN, August 1st, 1880.

BLISTERS.

HAVING received various complaints regarding the blistering of albumen paper, I desire to say, that if photographers, during the heated season, will observe the following rules, they will have no cause for complaint:

1. Keep the albumen paper in a cool place, and do not allow it to become too dry.
2. The printing solution should be thirty to thirty-five grains strong.
3. Fume about half as long as during the cold season; a piece of camphor added to the ammonia will prevent prints turning yellow.
4. Before fixing, and after having thoroughly washed the prints, place them in a trough of clean water, to which should be added one handful of common washing soda; allow prints to remain about half an hour.
5. The hypo, or fixing solution, should be from one to twenty, with a small quantity of bicarbonate of soda added thereto.

Sixthly and lastly. If the above rules are strictly observed, photographers will find that the celebrated S. & M. brand of albumen paper will give the most beautiful results, and greatest satisfaction to all who use it.

Hoping you will kindly insert the above in your next issue, I am

Yours truly, G. GENNERT.

*Answers.*

WILL try and help a little in my poor way, "Flippo" and E. B. Core.

My printing bath is as follows: Forty grains strong; muriatic acid, five to eight drops, which will throw down a precipitate; drop in aqua ammonia until it is an alkali solution; don't filter out the precipitate. This bath makes good strong prints, that tone easily. If "Flippo" will try this bath, he will never be troubled with its discoloring.

Water varnish:

Saderac,	2 ounces.
Turpentine,	2 "
Water,	16 "

Negatives ought to stand over one day after being varnished. SYNTAX.

For fifteen years I have been a continual reader of your valuable journal, and would as soon think of doing without silver nitrate in my studio as your journal; it is always full of new and good ideas. During the past two years I have visited a good many galleries through this State and Wisconsin, demonstrating the carbon process, and I am surprised to find so many without this or any other journal. I make it a rule to talk this matter up in *every* gallery I visit, and I hope my influence has sent you a few names at least.

A few answers for the "Sphynx" in July number:

E. B. Core, be not afraid to uncork your pound of nitric acid; what light and air it gets in this way will never injure it. If you are troubled with fog, examine well your collodion before going through your bath.

Water varnish or gum solution:

Pure White Gum-Arabic, . .	1 ounce.
White Sugar,	$\frac{1}{2}$ "
Soft Water,	16 ounces.

After being dissolved, filter through a *large* wad of cotton; if you use plenty of cotton, it will filter readily. Flow over your negative three or four coats of this while wet; when dry, proceed to retouch and etch; if your pencil scratches through, you have not flowed the plate times enough. A coat of this on a weak tintype will be found to prevent varnish from drying dead.

I always iodize my bath by dipping a collodionized plate over night; collodion iodized with ammonia, four grains, and iodide of potassium, two grains to each ounce of collodion.

Fusing a silver bath will not remove iodides; precipitate and filter. I don't believe in iodizing while fusing. Prints are more permanent from using alkaline silver.

Salt will precipitate silver from pyro; if there is iron with it, I use a solution of sulphuret of potash in place of salt.

I use nothing but gold, and water made neutral with bicarbonate of soda, and I never have any trouble in obtaining the rich purple-brown you speak of. I get *scrap gold* of the dentist, and dissolve it myself, in this way I get twenty-four grains of pure gold for one dollar; where, if I dissolved a gold dollar, I would get only about eighteen grains of gold and six grains of something else, which is not worth a snap to tone with.

I never was troubled with paper turning my bath red; I always keep my paper-bath in the dark, and when I want to use it it is always clear.

Try the following, and see if your prints turn a dirty-brown in the hypo: As soon as your paper is surface-dry, take the first sheet you silvered and dry thoroughly over a lamp, and hang in a fuming-box, and so on, until all is dry; now fume about fifteen minutes, and print as soon as possible; if your paper is not thoroughly dry, it will go back on you every pop.

I keep my paper in a box 20 x 24 x 10, and lay over it a damp cloth the night before using it. I use a fifty-grain bath, and silver about sixty seconds. Always test your bath before using it, as to strength and acidity; don't forget this important point.

Very respectfully,

C. S. PECK,
Dodge Center, Minn.

Editor's Table.

CENTENNIAL PLATES.—Many of the users of these plates are aware of the fact, that the manufacturers have withdrawn them from the market, being unable to afford them at the low price. By some intuition or characteristic foresight, Messrs. N. C. THAYER & Co., 149 Wabash Avenue, Chicago, have secured a stock of these goods, which, as you will see by their advertisement elsewhere in this issue, they offer still at the old price. These gentlemen are now "fixed" in their new and beautiful "double-decked" store, and invite the patronage of all who need photographic requirements. They are in splendid shape to do business, and they do it, as we saw during our late visit there.

MR. HIRAM J. THOMPSON's piano and balustrade accessories were so largely ordered during the Chicago Convention, as to cause an extra force of hands to be put on for their manufacture. The last, it will be remembered, was shown in our last picture by Mr. GEHRIG, whose neat studio we saw while in Chicago. Read Mr. THOMPSON's advertisements.

MESSRS. DOUGLASS, THOMPSON & Co., 229 and 231 State Street, Chicago, were "the observed of all observers" during the Chicago Convention, their store being crowded day and night by the photographic pilgrims. The lemonade-bowl and the cigars were an attraction to some, being freely set out all the time; but the splendid variety of goods offered by these gentlemen attracted many buyers, and made them busy enough. See their new advertisement.

THEODORE LILIENTHAL, Esq., of New Orleans, La., called upon us previous to our Chicago visit. He was homeward bound, being unable to attend the Convention.

The photo-engravings in our current issue are by Messrs. CROSSCUT & WEST, Philadelphia.

DAVID TUCKER, Esq., the famed stock-dealer of Buffalo, honored us with a call during our absence. Mr. TUCKER enjoys a large patronage.

OUR September and October issues, with the *whole* of the Convention proceedings, will be mailed, as long as they last, for \$1. September to December, 1880, \$2.

OWING to the overcrowded condition of this issue with Convention matters, we are obliged to omit many good things editorially, such as pic-

tures received, notices of galleries, etc. We have also many notes of visits made while on our journey to and from Chicago, which we are obliged to lay over to a future opportunity.

Meanwhile, we have to ask our readers' patience. All will appear in good time, after the Convention reports have ceased to absorb all our extra space.

WE have received from WILSON, HOOD & Co., Philadelphia, their illustrated price list, dated August 5th. They offer a full line of the most attractive articles, at the very best market prices—frames, stereoscopes, stereoscopic views, photographs, fancy goods, graphoscopes, albums, etc. Their customers will find it quite an advantage to thus early be able to secure lists of fall and winter goods in this line, and we would advise our readers to consult this catalogue before elsewhere purchasing their holiday goods.

MR. THOMAS STOUT desires us to call attention to his advertisement in "Specialties," of a gallery for sale. Mr. STOUT assures us that this is a valuable opportunity, and that the real estate is worth nearly the amount asked for the whole.

THE CHICAGO CONVENTION REPORT.—We have a great deal to say upon the subject of the Chicago Convention. We look upon it as one of the greatest events which ever occurred in our art. It promises much for the future. Best we can, we shall point this out presently. We are too crowded now, and must not longer delay our issue.

The Convention was a splendid one all in all. We knew it would be, and therefore ventured to employ our own stenographer, and give our whole time during the sessions to securing a complete and full report of the proceedings. Part of this we give in our current issue. The balance will occupy part of our next.

We beg you all to read it. It will do you good; it will cheer you; it will help you, now and in the future. Take interest in it, and join the tide which will lead to so much for us all. See the list of officers in our "Specialties" column, and join them—us—*now*, in the effort to secure for next year the greatest feast of fat things photographic that the world ever knew. Read the "Congratulatory" of the excellent Secretary, Mr. DOUGLASS, and the "After Adieu" of the warm-hearted, noble late President, Mr. RYDER.



MEYER VON BREMEN.

BERLIN, PRUSSIA.

THE LITTLE BROTHER.

T H E

Philadelphia Photographer.

Vol. XVII.

OCTOBER, 1880.

No. 202.

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In the office of the Librarian of Congress, at Washington, D. C.



PHOTOGRAPHERS' ASSOCIATION OF AMERICA.

FIRST ANNUAL CONVENTION HELD IN
CHICAGO, ILL., AUGUST 23D, 24TH, 25TH,
26TH, AND 27TH, 1880.

(Continued from page 275.)

MR. HIRAM J. THOMPSON'S EXCURSION.*

AGREEABLY to invitation, the afternoon of Wednesday was devoted to the excursion on Lake Michigan, per steamer "Flora," given by Mr. Hiram J. Thompson, the well-known stock-dealer of Chicago.

As we stepped aboard, a violent thunder-shower came up, but the reassuring smiles of Mr. Thompson and his splendid staff officers, Messrs. Pattison and Williams, inspired courage in all hearts to embark upon the journey and share the pleasures of the occasion. The "Flora" was started, and the storm ceased, the sun came out, and the pros-

pect was fine for a sail to Evanston. Alas! for human hopes. Ere six miles of the journey had been made, the wind changed, the billows rolled, the boat rocked—and the passengers? Ah! what woe came upon the once lively scene! The most active—the most cheerful—those who did the most for the pleasure of the occasion—were suddenly stricken down with "misery," and the "Flora" had to be put about and returned to the limits of the breakwater ere the "sick nigh unto death" would cease their—clamorings—or give the least sign of recovery.



Pattison observing the enjoyment of the Photo-Excursionists!!!

This was too bad, but what some did not enjoy, other some seemed to—especially the wise ones who sat quietly on the upper deck, and inhaled the healthful breezes.

After a cruise of an hour along the city front, the party stepped ashore, with three cheers for Mr. Thompson and his jolly crew.

* Illustrations by L. W. Seavey, New York.

It was a pleasant break into the hard work of the Convention, and, doubtless, all the participants were clearer-headed for it next morning. A band of music was on board, and helped to enliven the occasion. Many pleasant incidents could be recorded, but our space forbids us to more than give one more figure, of an anxious St. Louis editor folding the agonized arms of his sick wife—



beloved by all, but "so sick" by "fits;" and to thank Mr. Thompson for his liberality.

FOURTH SESSION. THURSDAY, AUGUST
26TH, 1880.

The Convention was called to order at 9.30 A.M.

THE CHAIRMAN.—The Committee on College, Mr. C. D. Mosher, chairman, will offer his report.

MR. MOSHER.—The report on the college project is this: We have talked the matter over, and we feel the want and necessity of a college. Had we had it twenty years ago, how much further we could have been advanced to-day in the art than we are now, and what trials and what perplexities saved. How little progress we have made that we should have made had we had this college. We, proprietors of photographic establishments, all feel that, could our employees have the benefit of a college, conducted as other colleges are for other professions, it would be a great advantage to us; and it would be an advantage that we all must feel cannot be dispensed with. We ought to have it, and it ought to be organized in some form or another, so that it can be carried out successfully; but we haven't arrived at that point quite fully as to the

manner of carrying it out. We know the necessity of it, and we all feel that we would like to have an expression of opinion of members of the Photographic Association, to see if they would indorse it; and if they will, we can have a committee appointed to consider the propriety of establishing a permanent college.

A motion to appoint a Committee on College was seconded and carried.

Here considerable discussion followed upon the mode by which the officers should be elected, taken part in by Messrs. Sinclair, Bankes, Secretary Copelin, and others.

The Chair decided that the Constitution provided for the mode of electing officers, and that the Committee must now be heard. Whereupon Mr. Carlisle read the

Report of the Committee on Nominations.
—Your Committee met yesterday, and organized at 6 P.M., Mr. John Carbutt, of Philadelphia, presiding; Mr. G. M. Carlisle, of Rhode Island, was chosen Secretary. Upon a ballot being taken, Mr. John Carbutt, of Philadelphia, was unanimously chosen as nominee for President for the ensuing year. Mr. John E. Beebe, of Chicago, being the choice of your Committee for Secretary, and Mr. A. Hesler, of Chicago, for Treasurer.

Your Committee also took under consideration the location for the next annual meeting; a majority voting for Saratoga as the place, and the third of June as the time; New York being the second choice, five voting for Saratoga and three for New York city.

MR. BANKES.—As a member of that Committee, it is but just that I should state that the nomination of Mr. Carbutt as President was altogether unexpected by that gentleman, and in fact was not desired in any way. We had to urge it upon him very strongly and repeatedly before he would accept; he peremptorily refused two or three times, but in casting about for a suitable candidate for the position, it seemed necessary that we should select a man of national reputation. We have here a number of gentlemen who would worthily fill the office of President; but, while they may be known to the members of this assembly now, they may not be

known outside of their own State. If we were working for the present, it would be a matter of small moment whether the President be a man of national reputation or local reputation; while we have but, I think, two hundred and ninety members now, we look forward to the time when we may have a thousand. So we give you a name in Mr. Carbutt's that at once commends itself to almost every photographer all over the land; a gentleman not only of a national reputation, but, I might say, of a world-wide reputation; a gentleman who has contributed largely to the advancement of the art which we all desire to see placed on a higher plane than we at present occupy.

I deemed these remarks necessary in order to place Mr. Carbutt in a proper position.

MR. SINCLAIR.—I move that the report be received and laid on the table for the purpose of electing the officers in the way suggested by me.

MR. FRANK THOMAS.—I would like to put in nomination a gentleman for President who is well versed in parliamentary usage and in photography, and that is my friend Edward L. Wilson, of Philadelphia.

MR. WILSON.—Mr. Thomas has surprised me by his nomination, but I would not think of such a thing as running against such a man as Mr. John Carbutt. He is my old friend, and my senior, and my superior. I have had enough honor at the hands of the photographers of America, and enough abuse to teach me to desire nothing in the shape of office. I wish to go quietly and peacefully along the rest of my days, and, if I continue to work as I have done, they won't be very many. I beg to withdraw. [Applause.]

Numerous cross-motions were now made, and finally the election was proceeded with.

The Chairman appointed as tellers Messrs. Bankes, Sinclair, and Merriam.

On motion of Mr. Sinclair, the Secretary cast the ballot of this Convention for John Carbutt as President, and he was declared elected.

MR. CARBUTT.—*Mr. President, Ladies, and Gentlemen of this Convention:* "The honor to which you have so suddenly called me is so entirely unexpected, it almost, I might say, takes away my breath; but I rise

to thank you, and must be very brief. It was the furthest off from my mind that I should be called to fill any office. I am so fully occupied in what I am engaged in, that, as my friend said to you, I most strenuously refused to allow my name to be presented until it would almost seem to be an insult to further refuse it; but, as you have done me the honor to elect me to this important office, I will only return to you my sincere thanks for it, and say now that my very best efforts will be put forth in the interests of this Association. [Loud cheers.]

THE PRESIDENT.—We will now proceed to the election of a Secretary.

The names put in nomination for Secretary were: John E. Beebe, A. J. W. Copelin, G. A. Douglass, Robert Benecke.

MR. COPELIN.—I must respectfully decline.

A MEMBER.—I would like to ask if Mr. Douglass is a practical photographer.

THE PRESIDENT.—Yes, sir.

The name of Henry T. Anthony was also put in nomination.

The ballot for Secretary resulted in the election of Mr. Douglass.

MR. BEEBE.—I move that the nomination of G. A. Douglass be made unanimous. He is one of the whitest men that ever dirtied his fingers with nitrate of silver.

This motion was seconded by Mr. Marks, and carried unanimously by a rising vote.

THE CHAIRMAN.—We will proceed with the election of Treasurer, Mr. Hesler being the only nominee.

MR. BEEBE.—Allow me to say a word. The first picture he made of me was when I was eleven months old, and he has watched me ever since; and all I know of photography, I know from him. All who know him, know him to love him; and his honesty is above par. I move we make his election unanimous.

Motion seconded, and carried unanimously.

Here Mr. Douglass entered, in charge of a Committee, and said: "Well, gentlemen, you have got me at rather a disadvantage. I came here with a friend to meet a gentleman he wanted to see, and I found three or four gentlemen rapidly approaching towards the front of the building, and one of

them almost jumped on me, and he said he was looking for the Secretary. That surprised me, and, of course, I cannot say very much to you now. I am very grateful for the honor, and I could say a good deal, if I had the time and was prepared; and, if you will allow me only to say that, I beg to thank you heartily, and will do my best. Those who know me know what that means." [Loud cheers.]

MR. COPELIN.—I move that the list of Vice-Presidents, as nominated by the Committee, shall be elected by acclamation.

Motion seconded, and, after some changes, was carried.

The list of Vice-Presidents finally elected was as follows: D. H. Clifford, Maine; W. G. C. Kimball, New Hampshire; A. N. Hardy, Massachusetts; G. M. Carlisle, Rhode Island; E. Bierstadt, New York; W. D. Osborne, Pennsylvania; M. W. Garrett, Delaware; D. Bachrach, Jr., Maryland; C. W. Motes, Georgia; C. W. Swift, Florida; W. W. Washburne, Louisiana; H. R. Marks, Texas; Robert Benecke, Missouri; J. H. Parsons, West Virginia; A. L. Blanks, Mississippi; T. M. Schleier, Tennessee; H. Klauber, Kentucky; E. B. Ives, Michigan; L. Van Loo, Ohio; L. D. Judkins, Indiana; H. Rocher, Illinois; H. S. Sutter, Wisconsin; T. W. Bankes, Arkansas; S. Root, Iowa; J. T. Masey, Kansas; E. L. Eaton, Nebraska; Charles Weitfle, Colorado; J. A. Todd, California; R. Douglass, Washington, D. C.; Mrs. M. A. Eckert, Montana; J. H. Larkin, Alabama; J. N. Eddy, Ontario, Canada; F. J. Haynes, Dakota; C. A. Tenny, Minnesota.

The following nominations were made for members of the Executive Committee: E. Klauber, J. F. Ryder, E. L. Wilson, J. H. Fitzgibbon, Robert Benecke, and I. N. Hardy.

Upon a ballot being taken, the following were elected: Messrs. Ryder, Wilson, and Klauber.

The Chair appointed W. W. Washburne, New Orleans; H. R. Marks, Texas; D. Bachrach, Baltimore; Leon Van Loo, Ohio; John R. Clemons, Pennsylvania, as the Committee on the Progress of Photography.

MR. BANKES.—I believe the Committee on Location have recommended Saratoga

as the next place of meeting, but there was a minority of that Committee who dissented from that view, both as to time and place, and I move as a substitute for the report that the place of meeting be Cincinnati, and the time the third Tuesday in August.

MR. CARVALHO.—I think, Mr. President, and gentlemen of the Convention, that the large city of New York and the surrounding cities, which represent a large number of photographers contained within their limits, should be considered. Saratoga is a very costly place to live in, and I wish to raise a point where the Association can save a little money. I happen to be the fortunate possessor of a very large establishment with four floors, and room even more than we have here now, and I am prepared to offer to this Convention, if they will consent to hold their next meeting in New York city, all the facilities that they have here, in the way of exhibition rooms, gallery, and appointments that are there during the whole week that they hold their session, free of any cost whatever. (Applause.) I move, as an amendment, that Saratoga be stricken out, and New York inserted in its place.

MR. WILSON.—Mr. President, I wish to say a word for Saratoga. This is an important matter. We all know that the National Photographic Association "split" on fifty different "rocks," the largest one was the place of meeting. I think we have always made a mistake in meeting in large cities, where our expenses for hall, with this exception, have always been heavy. Our daily expenses are heavy, and we see so many things around us to divert our minds from doing good to ourselves and each other, that I believe the whole principle of meeting in large cities is a great mistake. I suggested Saratoga for this reason. I belong to a large body of distinguished gentlemen, including myself (laughter), who met in Saratoga last year; they had a most delightful time. We all know what a resort it is as a watering-place, where people go for health, but there are other things I look at besides health; I look at our photographic health, our business health. Saratoga is in the country, and is a beautiful place. We can get board there in the private boarding-houses, which are

very numerous, and one of the hotels would be open at about a dollar a day. Think of it. We can gather to our membership there from a very large section of country, and, perhaps, more than double our strength; that I feel very sure of. But the great advantage is still to be named, and that is the *practical* advantage of meeting in some such place. For the money that we save by going there we can erect a large temporary skylight, in which we shall have selected models posed, and have practical photography before our eyes—not *talk* but *work*. We can bring our view cameras along, and will find beautiful pictures for them in all directions. There we can try dry plates or wet plates, or we can practise carbon or even artotype. I hope that with these practical things in your mind you will support the Committee in going to Saratoga; make a sacrifice, go there, and you will feel well repaid, even if you have to go home again and take your holiday later in the season. [Applause.]

MR. KLAUBER.—I am very much in favor of going to some little country town, such as Saratoga; but the gentleman that suggested Saratoga also suggested a place called Asbury Park, that is within an hour and a half's ride of New York, and I believe two hours' ride of Philadelphia, and we can take in both cities at the same time, and attend to our business.

MR. WILSON.—I would not object to Asbury Park, because the same advantages urged in favor of Saratoga will hold good there. There are beautiful subjects for pictures there. Do not let us go to a large city.

A ballot was then taken, with the following result: Santa Fé, New Mexico, 1; Chicago, 6; St. Louis, 4; Cleveland, 13; Asbury Park, 7; Saratoga, 31; New York, 58.

MR. SOUBY.—I move that the Association accept Mr. Carvalho's proposition, with thanks, unless the Executive Committee see fit to change the place of meeting. Carried.

MR. KLAUBER.—Your Committee is ready to report on dry plates.

Mr. Stein read the report of the Committee, as follows:

The Committee on Dry Plates met at the studio of Mr. Copelin. Mr. Carbutt, of

Philadelphia, and Messrs. Cramer and Norden, of St. Louis, were represented. Each exposing two and three seconds, against twenty and thirty seconds of the wet process, with results in favor of Mr. Carbutt. The second day's work resulted the same as the first.

Although the Committee can recommend Messrs. Cramer and Norden's plates as being very good, it seems that Mr. Cramer has not had practice enough, but in time will stand equal with the best.

And it is the opinion of the Committee that every photographer should give the dry plate a fair trial. As worked by Mr. Carbutt and Mr. Cramer it gives best success. Now we would recommend that this body should appoint a committee of five, to whom dry-plate makers should send plates for experiments at home, they sending their results, with remarks, to the different photographic journals.

This Committee recommend a vote of thanks to Mr. Copelin, who generously, and greatly to his inconvenience, gave us the use of his skylight for these experiments.

Respectfully,

E. KLAUBER,
Chairman of Committee.

S. L. STEIN,
Secretary.

MR. SCHLEIER.—I move that the report of the Committee be received; that thanks be returned to them, and that they be discharged.

The motion was carried.

THE PRESIDENT.—I appoint as a committee, pursuant to the report just read, Messrs. Schleier, Klauber, Benecke, Bierstadt, and Guerin.

The Secretary announced that a photograph of the members of the Association would be taken immediately, at recess, by Mr. Edgeworth.

On motion, the Association took a recess to 2.30 P.M.

FIFTH SESSION. THURSDAY AFTERNOON,
AUGUST 26TH, 1880.

The Convention was called to order at 3.15 P.M.

MR. CARVALHO.—Mr. President, I have a preamble and resolutions to offer.

WHEREAS, It is an undisputed fact that the energy and faithful labor of Mr. A. J. W. Copelin, of Chicago, has conduced in a great measure to the organization and first meeting of the Photographers' Association of America, and

WHEREAS, All of this has been done by this gentleman without any recompense other than the grateful thanks of the fraternity, and

WHEREAS, These thanks should be placed in some suitable shape that will remain as a memento of said good will, therefore be it

Resolved, That the grateful thanks of the Photographers' Association of America, now in convention assembled, are eminently due to Mr. Copelin, and herewith tendered.

Resolved, That the Secretary of this Association be and is hereby directed to have this preamble and resolution engrossed and properly framed.

Resolved, That the Treasurer, through the proper channel, expend the sum of twenty-five dollars for said purpose.

Resolved, That the sum of one hundred dollars be sent to Mr. Copelin, in cash, by the Treasurer.

Seconded and unanimously carried.

MR. COPELIN.—I am very much obliged to the gentlemen, indeed, for their kind intentions, and would say that it is entirely unexpected on my part, and the fact of the matter is, I have no desire to receive any cash for the services at all. I worked for the interest of the Association, and labored, if I may be allowed to say, hard for the Association, simply for the purpose of putting it on its feet and bringing us all together, without any expectation of reward. I may say that I don't feel deserving of it, because it was done entirely for the interest of the art, and I don't feel exactly like receiving money for what I did for the interest of the art; but I can assure you that I do thank you sincerely for your kindness, and for the many kindnesses you have shown me while occupying the position I have for the last four days. [Applause.]

MR. CARVALHO.—I have another resolution to offer.

WHEREAS, The Association has given into the hands of the Committee of Five of the Representative Photographers of the United States, the power of examination and publishing of their judgment on dry plates of all kinds, now therefore be it

Resolved, That this committee have power, in their discretion, to examine any other improvements that may pertain to photography and its kindred branches, and publish their best judgment for the benefit of the craft at large.

Seconded and carried.

Mr. Wilson moved a vote of thanks to Prof. Mapes, and to Messrs. Gray, Hewitt & Co., the stenographic reporters of the proceedings. He also expressed Dr. Vogel's regrets at not being able to attend this meeting as he had expected.

Mr. Wilson also spoke of Mr. Leon Vidal's best wishes for this organization, and expressed the hope that it would become a part of the Photographic Syndicate of France.

It was suggested that all present strive to get notices from their local newspapers of this Convention, reports of the proceedings printed in them, etc., in order that our name and fame might increase, and our art be thus popularized.

Mr. Wilson, in view of the fact that the afternoon was to be devoted to discussion, read a poem from an English newspaper, called "Boil it Down," the sentiment of the whole being:

"Whatever you have to say, my friend,—
Whether witty or grave or gay,—
Condense it as much as you possibly can,
And say it in the readiest way—
Boil it down."

Mr. John R. Clemons, of Philadelphia, was now introduced by President Ryder (although everybody knows him), and proceeded with one of his characteristic lectures upon the work of the printing department. After he had done, he acted as an encyclopædia, and stood a fire of questioning that would have overpowered any one less familiar with his subject than Mr. Clemons. He met all with his usual grace and good humor, and gave out much information.

It is almost impossible to report for print on such an occasion as this, and, indeed,

Mr. Clemons asked that, in mercy to him, we would not do so, as he could not himself understand our report of his last address. We therefore refrain from what we should consider a duty otherwise, and merely give a synopsis of what Mr. Clemons said.

He first treated of the causes of blisters, attributing them to the carelessness of the manufacturers of plain paper; then the treatment of paper was discussed—the silvering, toning, elimination of hypo, washing, turning of the color of the paper, the bluing process (given by Mr. Frank Thomas recently in these pages), and the new permanent pink paper. Prints were shown by Mr. Clemons, to prove the value of his method of eliminating hypo, etc., and then catechetical exercises followed for about an hour.

Prof. T. J. Mapes now entering the room at this time, Mr. Clemons kindly gave way, *pro tempore*, when Prof. Mapes was introduced by Mr. Edward L. Wilson, who said: “By permission of Mr. Clemons, I am given one minute to introduce to the Convention Prof. T. J. Mapes, who gave us our magic-lantern exhibition on Tuesday evening. He has spent a great deal of time in that branch of our art, and was himself a practical photographer. We ought to see his face, and hear him speak.”

PROF. MAPES.—I am happy to meet so many of you here. I aimed to give an entertainment, the other evening, that would interest photographers, as well as the general public. I aimed to exhibit such pictures as would be of interest to photographers. The entertainment was a little longer than I expected to make it, but I expected to have more pictures brought by photographers. Mr. Wilson wished me to make the acquaintance of the photographers in this way, and I am very happy to make it. I leave this evening for an extended tour to the East. So, at Mr. Wilson’s suggestion, I stayed long enough to say what I have. [Cheers.]

Mr. Clemons was now questioned at length again, and a number told of their methods and of their trials with paper—the old, old story over again.

In conclusion, Mr. Clemons said: “There are many things I could say, but I do not

want to take up your time. I do wish to state that I do not want anything that I say here reported; for, when I spoke before, it was reported, and I could not make head or tail of it. The *British Journal* undertook to print it, but they had to stop. I think people who come here to hear what is going on in our Association should be the only ones to receive the benefit. The stingy ones, who do not come here, read what has been done, and get the benefit of it, without paying.” [Applause.]

MR. WILSON.—Mr. President, I move a vote of thanks to Mr. Fitzgibbon for his arduous labors in promoting the interest of this Convention in his magazine. He feels that he has done a great deal of hard work, and all men who work hard deserve this acknowledgment.

Seconded and carried.

MR. WILSON.—I have just received a letter from Germany, from Mr. G. Gennert, the agent of a large manufacturer of albumen paper, saying that I might announce to the Convention “no more blisters,” on account of some improvements recently made. [Applause.]

MR. KLAUBER.—I have got to leave on the early train, and I therefore bid you good-by. I hope you will all go home, and raise your prices, and come back next year with plenty of money in your pockets. [Cheers.]

On motion of Mr. Carvalho, Prof. Henry Draper, of New York city, was made an honorary member.

On motion of Mr. Gentile, Mons. Henry Collard was made an honorary member.

The Secretary read the following resolution, which was unanimously adopted.

Resolved, That the Committee on the Progress of Photography be requested to inquire into the validity of the Swan carbon—Lambertype—chromotype process, or both, and report in the photographic magazines for the good of the craft.

The resolution was signed by the following named gentlemen: E. J. Souby, H. L. Blankes, John J. Burke, J. P. Beebe, and W. F. Willett.

The Secretary read the following dispatch received by him.

“The seven photographic galleries of Quincy,

Ill., have all entered into a bond of fifty dollars, not to open their galleries on Sunday, or make any sittings on that day.

"(Signed)

E. LONG."

MR. COPELIN. — That is one of the good effects of this Convention. [Loud applause.]

MR. FITZGIBBON. — I move that a vote of thanks be tendered to Mr. E. L. Wilson, of the *Philadelphia Photographer*, for the interest he has taken, and the labor he has devoted to the success of this Association.

The motion was adopted with applause.

THE PRESIDENT. — Mr. A. C. Sunderland, of Fort Edward, New York, will now address the Association on the subject of "Chemicals."

Mr. Sunderland spoke as follows:

Mr. President, Ladies, and Gentlemen of this Association: I have not had time to boil this down, but I will tell you what I have done; as the weather is very warm, I have evaporated it.

Last evening, a little informal meeting was held in this room, and a great deal was said on the subject of chemicals. I had supposed that, to a great extent, the time for chemical difficulties had passed. I may say the time for them is or has passed, but the difficulties of some of them, perhaps many, remain. It is said that Franklin captured the lightning, and that Field concentrated it, and drove it across the Atlantic; and it may be said of photographers that they have captured light, and made it so subservient to their will that it enables them to capture and hold fast the shadow of the subject which it reveals to us, and such subjects as are dear to us; enabling us to hold and retain them, while the objects themselves may have ceased to be.

As with Franklin and with Field so also with us. It was something to discover the horse, and it was something more to construct a harness for it. For the first three decades almost our whole attention has been given to the medium by which light-effects were to be produced. For the last ten years almost all our attention has been given to the light-effects themselves, and how we could present them in their most pleasing mode, or, in other words, we spend three-quarters of our photographic life in learning to control the subtle influence connected with our chemicals, and one-third in learning to control the subtle and peculiar operations of light, and the still more subtle and more peculiar operations of our customers. How well some of you, at least, have succeeded in this department of our work, an adjoining room up-stairs will testify; but

while such beauteous effects are produced, no one but photographers know so well what persistent study and painstaking labor are required to produce them.

There seems to me, sir, to be one thing more which the photographer needs to enable him to be abundantly successful; one more obstacle to be removed from his path to assure his complete success. Although, as I said, three-fourths of his photographic life has been spent in perfecting the medium through which light has been made available, yet that medium is still somewhat balky. A great deal of that unavoidable difficulty is occasioned by another avoidable one; I refer to impure chemicals. It is enough for the photographer, with all his other cares, to have to wade through the intricacies of photographic chemicals in their natural and normal natures and affinities to each other, without having difficulties of impure chemicals to contend with, to say nothing of financial loss incurred by paying for such, especially as some of them are quite costly. Because photographers, as a class, are a persevering and patient body of men, for they are, however generally people may be aware of the fact, it is still a fact that no class of men, in my humble opinion, swallow, with so serene a countenance, so many bitter pills as the photographers. I repeat, then, that because photographers, as a class, are a patient and persevering lot of men, is no sufficient reason why they should be the losing subjects of an unprincipled class of manufacturers, who, after introducing a good article and getting a reputation for it, allow it to deteriorate, or, what is worse, adulterate it in order to increase their gains.

I would, therefore, Mr. President, as I understand the object of this Association to be the mutual protection, as well as interest, of its members, propose that a standing committee be appointed — one which has no interest in the manufacture of any chemicals that we use, except the common interest that photographers have — a committee to test chemicals, and, if necessary, to analyze them for the benefit of the craft and the condemnation of unprincipled manufacturers. For instance, if a photographer received an article which, upon due trial, strict examination, and lawful information, instituted and gained by himself, he has every reason to believe is impure and adulterated, instead of returning it to the manufacturer or stock-dealer, let him send it to this committee for their examination, — for, in the nature of the case, all of the photographers cannot be analytical chemists, — and if such committee shall find the article

impure or adulterated, the members of this Association shall be notified of the fact, and such manufacturer shall receive the ban of this Association; and thus shall it be seen that our motto regarding all those with whom we have to deal is what we would have men use regarding us, the survivor of the fittest. [Applause.]

Mr. Copelin moved that votes of thanks be tendered to John B. Drake, of Chicago, the proprietor of the hotel, to all stock-dealers who have contributed to the funds for the success of the Convention, and to the Chicago press.

The motion was carried.

Mr. Clifford, of Iowa, moved a reconsideration of the vote by which the location of the next exhibition and Convention was decided to be held in New York.

The motion was lost.

A desultory conversation here ensued in regard to the blistering of paper.

THE PRESIDENT.—I appointed as Committee on Life Insurance, A. J. W. Copelin, W. W. Washburne, E. G. Robinson, Mrs. E. N. Lockwood, T. W. Bankes, T. P. Maryatt, Isa Black, C. M. Carlisle, and C. D. Mosher.

MR. CARVALHO.—Before adjourning, I wish to offer a resolution, which is seconded by Mr. Gentile:

WHEREAS, The retiring President, Mr. J. F. Ryder, of Cleveland, has presided over our deliberations with fairness and judgment, and

WHEREAS, Much of the success attending said deliberations is due to his kindly, good advice, in closing old sores, and

WHEREAS, This gentleman has the full respect of each and every member of this Convention; therefore, be it

Resolved, That the Photographers' Association of America, in Convention assembled, would wish, and does tender, Mr. J. F. Ryder its hearty thanks.

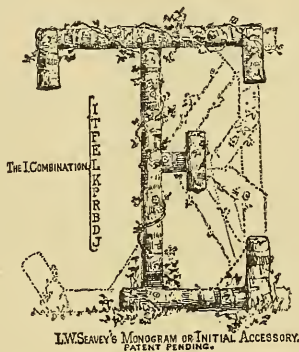
Resolved, That the Secretary be directed to transmit a copy of these resolutions, duly signed by the President, and countersigned with the seal of the Photographers' Association of America.

The resolutions were adopted by a rising vote of the Association.

MR. RYDER, in responding to the resolutions, said: Gentlemen, it is very gratifying

to me to see such an evidence of your good will towards me. I certainly have been very happy in seeing so many of the better class of photographers, and of those who are interested in this Association here. It has pleased me greatly. Our exhibition is the finest we have ever had; not the largest, perhaps, but a very fine collection. The feeling here has been capital, everything has been all right, and in bidding you good-by, as I shall when we adjourn, I hope you will not forget that we are going to have another meeting. I hope that you will all be there, if possible. Do everything you can to keep this ball rolling, now that it has started so well. I return you my thanks for your attentions to me. [Applause.]

Mr. Seavey's letter backgrounds having



arrived, that gentleman exhibited them to the Association, posing his little daughter

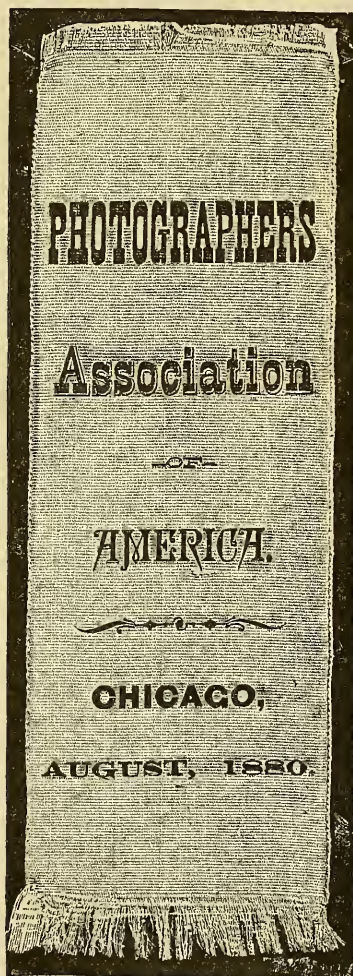


in several of the letters, to the delight of the members. (See report in our last issue.)

MR. COPELIN.—I move that the Convention do now adjourn, to assemble in New York next August, at such date as the Executive Committee shall decide upon.

The motion was carried, and the Convention adjourned.

Another experience meeting was held on Thursday evening, and largely attended, and thus closed one of the most pleasant gatherings of photographers that was ever held. Each member of the Association was provided with a white satin badge, from one of which we have caused a photo-engraving



to be made. This furnished the means by which recognition could be had, and promoted friendly intercourse. At all times

knots of photographers could be seen in the Exhibition Hall, in the Assembly-room, in the hotel parlors, and elsewhere, discussing the all-important interest which drew them there. Great good will surely result from this, and a large Association for future usefulness is bound to be the outgrowth. It *can* be—May we be able in 1881 to say—IT IS.

LIST OF EXHIBITORS.

THE work exhibited at Chicago averaged higher than that at any former national exhibition. It would be unfair for us to comment or particularize, so we fulfil our duty when we simply add a list of those who had sufficient public spirit to exhibit at all. We commend their enterprise, and hope, next year, the list will be largely increased.

LIST.

Curtis & Smith, Syracuse, N. Y.; C. C. Gentile, Chicago, Ill.; J. F. Ryder, Cleveland, O.; A. N. Hardy, Boston, Mass.; J. R. Muth, Clyde, N. Y.; G. Cramer, St. Louis, Mo.; Wolfe's Solar Process; Gilbert's Patent Process; H. Rocher, C. D. Mosher, L. A. Kraft, P. B. Greene, Chicago, Ill.; W. H. Partridge, Boston, Mass.; G. H. Monroe, Rochester, N. Y. (Dry); W. R. Wright, Princeton, Ind.; R. Walzl, Baltimore, Md.; C. W. Motes, Athens, Ga.; Harroun & Bierstadt, N. Y.; E. Long, Quincy, Ill.; Frank A. Place, Warsaw, Ind.; John Carbutt, Philadelphia, Pa.; T. M. Schleier, Nashville, Tenn.; W. D. Osborne, Philadelphia, Pa.; E. J. Souby, New Orleans, La.; C. H. Clark, Ottawa, Canada; S. S. Hull, Galveston, Tex.; Elmer & Tenney, Winona, Minn.; F. W. Guerin, St. Louis, Mo.; R. B. Israel & Co., Chicago, Ill.; Megatype Company, N. Y.; B. Meyer, Chicago, Ill.; L. T. Butterfield, Prairie du Chien, Wis.; J. A. H. Parsons, Wheeling, W. Va.; Bundy & Train, Helena, Mon.; C. Weitfle, Central City, Col.; A. J. W. Copelin, Chicago, Ill.; C. S. Winsor, Galesburg, Ill.; M. A. Holler, Williamsburg, N. Y.; J. A. W. Pittman, Springfield, Ill.; Irving Saunders, Alfred Centre, N. Y.; J. C. Stevens (E. G. Robinson), Michigan City, Ia.; E. L. Cordingly, Chicago, Ill.; Edward L. Wilson, Philadelphia, Pa.; J. M. Figley, La Harpe, Ill.;

W. E. Armstrong, Nashville, Tenn.; Edy Bros., London, Ontario; D. A. Clifford, St. Johnsbury, Vt.; R. Benecke, St. Louis, Mo.; J. E. Billbrough, Dubuque, Ia.; W. S. Wheeler, Ottawa, Ill.; G. Cramer, St. Louis, Mo.

DEALERS AND MANUFACTURERS.

H. J. Thompson (accessories, large display); A. C. Bryant (papier-mâché accessories); B. Philgrin (retouching-machine), Chicago, Ill.; E. B. Core's retouching-machine, Lincoln, Ill.; J. A. Todd, San Francisco, California (vignette printing-frame); L. W. Seavey (large display of backgrounds, and everything in his line); Gatchel & Hyatt, Cincinnati, O. (retouching-machine); Schwamm Bros., Chicago, Ill. (frames).

HYGIENE OF PHOTOGRAPHY.*

BY DR. NORMAN BRIDGE.

Mr. President and Gentlemen: I see, by the announcement, that I am expected to read a paper on photographic poisons. I am sorry to say that I have not a paper to read, but only a few notes, from which I will endeavor to occupy your attention for a short time, on the subject of the hygiene of the business of the photographer. I was very glad that the committee in whose hands were the arrangements for this meeting, thought it proper to devote an hour to the discussion of the hygiene of your profession, and am only sorry that they chose so poor an instrument to open the discussion.

The subject of the hygiene of occupations is one that requires much more attention; and, while the occupation of the photographer cannot be very unwholesome, I apprehend that some things might be learned, and a great many sanitary improvements might be made in the way in which the business is conducted.

There are many obstacles to the perfect health of people who pursue a vocation that requires them to do a particular thing, and not a great variety of things. An ideal occupation is certainly one that requires the person to indulge in physical exercises, great in variety, severe at times—great in variety as to amount of force used, and great in variety of muscular motions. An ideal occupation requires, also, that the mind should be exercised and interested, and that the

individual should be spared all deleterious influences in the shape of poisons. There are, in the civilization of to-day, in the great division of labor, very few occupations that are ideal. As we divide up the work of mankind, we require one man to do this particular part, another to do that. This man is obliged to labor with his hands almost solely; the rest of his body is idle. Another man labors with his legs. This man must be exposed to the fumes of poisonous gases; his business requires it. Another, escaping such afflictions, is exposed to the damaging influences of irritating dust; and so we find in our hospitals and among the community people afflicted with a peculiar lung disease.

Another class of people are obliged to be exposed to high heat and rapid alternations of lower temperature. These are workers in gas-works, in smelting- and rolling-mills. Others must suffer their feet to be in water much of the time, and catch cold easily. Others must endure the cold weather, without a possibility of exercise; and so we have another class of diseases—rheumatism, Bright's disease of the kidneys, and certain disorders of the spinal cord that are always fatal.

The occupation of the photographer is not an ideal one, but, in many ways, it is certainly an occupation that is conducive to good health. It requires a great variety of positions and of motions of the body—a great variety of exercise. The exercise is never severe. It has the advantage, too, that it deals with a subject that makes the mind a large part of the working machinery of the individual. It is at once an artistic employment, and one that calls into exercise the best kind of brains, and, therefore, it rises to the dignity of a profession. But there are certain chemicals and processes which you employ that are, and must always be, detrimental to health; and it ought to be the ambition, I am sure, of any profession, to make its occupation as harmless as possible. There are among these chemicals a number of gases and solid substances that are always harmful, especially when the individual is exposed to them a long time or continually. Some of these, I am persuaded, cannot be gotten rid of to any considerable extent. Others, to a large extent, may be gotten rid of, so far as their baneful influences are concerned.

Among the gases or fumes which the photographer is obliged to inhale may be mentioned those of alcohol and ether. A person going into a photograph gallery experiences an odor of ether at the very threshold. Photographers are in contact with this gas almost constantly while at work.

* Read before the Photographers' Association of America, at Chicago, August 25th, 1880, and since revised and corrected by the author.

It is useless for me to discuss here, as it would be out of place, the physiology of the action of ether, and of the poisoning of ether, further than to say this: That ether is a stimulant to the animal organism as alcohol is a stimulant, and that the poisonous effect, the injurious effect on the system, is and must be such as is produced by a constant stimulation by an unnatural stimulating agent. I may say here that many of the nervous disturbances, or some of them, that photographers are subject to, are capable of being produced by the fumes of ether constantly inhaled; whether they are so produced, or whether there are other agencies which produce the greater effect, it would be less easy to say. The vapor of alcohol is certainly no more harmful than alcohol taken into the stomach, and exactly the same effect will be produced, so I need not speak further upon that point.

There is given off, in certain processes of your manipulations, vapor of acetic acid, acetic acid in a gaseous form. Certainly, if one was to be exposed to this for a long time it might injure him, but the amount of acetic acid that photographers inhale must be exceedingly small. Then there are the fumes of hydrocyanic acid, which are given off from the cyanides in solution, and in the use of the cyanide of potassium, as it is used to remove stains from the hands. This is a substance that is exceedingly harmful. In the poisoning by prussic acid this agent produces great depression of the nervous system, and with this a derangement of the nutritive processes of the body.

Then in some processes of photography, there must be given off, in a small degree, the fumes of iodine and bromine. These are always irritating to the mucous membranes of the respiratory passages, and if they are absorbed to a considerable extent, the symptoms of what we know as iodism or bromidism would be produced. These are symptoms produced by administering to people large quantities of iodides and bromides as medicines. There is produced a condition of what we call cachexia, which is characterized by a paleness and sallowness of the complexion, and a general disturbance of the functions of the body, particularly the various secretions, and, as a consequence, the digestion and nutrition. With this there is nearly always produced more or less eruption upon the skin; but I think iodism and bromidism must be quite rare among photographers. Certainly, a photographer would be careless in his manipulations to experience enough of these fumes to produce this effect. But the poisonous solids which you are

obliged to encounter are, some of them, exceedingly harmful if they are absorbed in any quantity.

The first of these to be spoken of is nitrate of silver. Photographers are constantly blackening their fingers by contact with this agent, and, I am told, are constantly putting their hands into solutions of this agent, where the silver is dissolved from what you call the positive. When silver comes in contact with the hand in a sufficient concentration to blacken the epidermis, of course you get a very slight absorption. The silver unites with certain substances that are constituents of the skin, producing a compound; this compound you find yourselves able to wash away, or scrape away, after a few days, as a new and more healthy epidermis forms beneath it. It, of course, is not absorbable, and can produce no harm whatever, except a little local irritation; but there is an excess of nitrate of silver that is capable of absorption, and I think that every one who is constantly covering his hands with spots produced by this substance absorbs some of it. He is taking some form of silver salt into his system. Now we give silver as a medicine sometimes, and it is like a two-edged knife: it is valuable where it is proper; but it is not valuable as a regular diet; it is altogether harmful to take it into the system constantly. The symptoms that you would recognize in this poisoning are those of general debility. A patient who is, if you please, overcharged with the salts of silver, looks sallow. He has an appearance of cachexia. His digestion is bad; his tongue is coated; his secretions are sluggish; he is generally irritable, and feels ill. Such a person is generally ill; he is always ill; he looks debilitated, and as though he ought to take a vacation. Now, such people ought always to take a vacation—a vacation from the effects of the silver; they ought to avoid getting it into the system.

The hands of photographers are immersed more or less in solutions of the iodides and bromides. A very small quantity of these salts is capable of being absorbed in this way into the system, so little that slight harm, if any, is ever produced.

There is another substance which, in certain manipulations in the art, you are obliged to touch that is always harmful; that is, bichromate of potassium. Coming in contact with the skin it produces more or less eruption, if the skin is long exposed to it; and the dried particles of this substance floating in the air, and coming in contact with the mucous membrane, the nasal mucous membrane particularly, always produce

irritation. People who manipulate this drug in the manufacture of it, and in the handling of it, sometimes not only have severe eruptions on the surface, of little papules and pustules, most on those parts of the skin that are exposed most to the contact of the substances, but they get ulceration of the nasal mucous membrane. At first this irritation is like a common cold, then like the irritation of an uncommon cold—like the common hay-fever of summer; then, if the irritation goes on, they suffer an ulceration of the nasal mucous membrane, so severe sometimes that the septum between the two cavities of the nose is broken down, and a hole is made leading from one to the other. A similar but less severe form of irritation is produced on the mucous membrane of the bronchial tubes. Certainly no person can work habitually among the dry salts of this drug without having, very soon, a serious disease of the bronchial mucous membrane.

Another solid poisonous substance that photographers use is the cyanide of potassium. This is used almost entirely for cosmetic effects. Photographers dislike, as physicians, and chemists, too, to have their fingers constantly blackened, and so are willing to resort to a little inconvenience to remove black spots and stains. This is the cosmetic side of the question. Perhaps few men think of removing these stains because they think they are harmful; but we are anxious to remove the disfigurement. The cyanide, on a clean, unbroken surface of skin, is absorbed very little; it is absorbed very rapidly from a broken surface, where there are cracks upon the skin to which it is applied, and, as you know well enough, it is exceedingly harmful both to the broken point it touches and to the whole system. But on an unbroken surface, where it is least absorbable, the cyanide would do you much more harm than the silver stain could.

It would be interesting to go into a discussion of the poisoning by hydrocyanic acid, but I will not take up your time to do this. What we most want to know is how we can avoid injury from such poisons. We cannot really do very much toward antagonizing such poisons as I have referred to, by means of antidotes. It is true that, in the acute poisonings, something may be done with antidotes, if the physician is promptly at hand, and accurate in his knowledge of what to do, but not nearly as much as is commonly supposed, and only in case of a few of the poisons. The efforts of physicians are chiefly devoted to taking care of the system of the person poisoned, and helping him to tide over the injurious effect of the poison as well as possible.

It is more true that little can be done with

antidotes for chronic poisoning, so it is useless to discuss poisoning by this agent. But the symptoms of hydrocyanic poisoning are those of great nervous prostration.

In the acute poisoning, as through absorption from a cut, there is a sense of depression. The individual feels as though he was about to die—feels as though he could not breathe. His pulse becomes weak, and that nearly always means a rapid pulse. The pulse becomes weak or rapid, or, if the dose of the poison is great, the opposite extreme occurs, and the pulse becomes slow. There may be a sudden loss of the sense of hearing, and a fading of the sense of sight, or a disturbance of that sense, and great trembling may come on. These are some of the symptoms of profound nervous prostration.

There are other agents that photographers are obliged to come in contact with, which rarely do any harm. One of these, perhaps, is chloride of gold. I do not know just the form of the salt which you use most; but this agent, if it should be absorbed by the system in considerable quantity, would certainly produce poisoning.

There is another agent that is now coming into use to some extent known as the pyrogallie acid. It is coming into use in a variety of arts, including photography, as well as in medicine. It is capable of doing considerable harm if, in a concentrated form, it comes in contact with sensitive surfaces of the body. We apply it, sometimes, to certain skin diseases, and occasionally we have reported a case of poisoning, showing that it is an agent that should be used with caution.

Now, what are the measures, if they are any, that may be resorted to to avoid the injurious influences of these poisons?

The first thing to do, and, let me say, the cardinal thing to do, is to prevent these substances from getting into the system at all. The next cardinal thing to do is to try and obviate the injurious effects of such portions as unavoidably are taken into the body.

I am sure that the gases and the vapors that photographers are obliged to inhale might be rendered almost innocuous by just one precaution. Of course, you cannot dispense with the agents which produce these gases. In the manipulations of your art, they must be used; you are obliged to have them in great quantities, and of the very best quality; but there is one thing you can always do with the vapors and gases, and that is the thing that well-ordered cities do with their sewage. They cannot get rid of it; it is forever accumulating; it is always noxious; but there is one thing we can do with it—we can

dilute it. And every photographer may dilute these gases and fumes with the atmosphere to such a degree, that they are almost entirely harmless. The only way to dilute them is with atmospheric air.

Now, I am told—and I am loth to believe it—that the dark-rooms and laboratories of photographers are sometimes unventilated; that some think it impossible to ventilate their dark-rooms because of the danger of admitting light; and I am told, again, that some photographers are willing to live a considerable portion of their working days in unventilated laboratories, because it requires a little labor and expense to institute a system of ventilation. This seems to me altogether too trivial for us to talk about, because you are aware that it is possible to ventilate such apartments thoroughly, without interfering with their efficiency.

The ventilation that is necessary is certainly more than that which would be accomplished by having two or three small openings for the admission and exit of air. Some system should be devised, whereby a rapid and constant change of air in these little apartments can be certainly produced, and it is never a difficult thing to accomplish. A tallow candle, lighted and placed in a little flue, or a small kerosene lamp, in such a position that it will cause a current to pass up through the flue, and out of the laboratory, and a few holes at the bottom, for the admission of air, makes a constant and tolerably rapid current to pass through the room, and ensures a rapid change of atmosphere; and, certainly, tallow candles and kerosene are sufficiently cheap.

The ways of securing ventilation are simply numberless, and no photographer, with a little care of this sort in ventilating his rooms, need ever complain of the harmful effect of fumes and gases. By diluting them with atmospheric air in abundance, he will breathe them in such attenuation that they will do no harm.

The human system, like all animal bodies, is endowed with great power to resist noxious influences of all sorts. The study of the human system acquires great interest by reason of this fact. The inherent capacity of the system, when in health, is sufficient to resist the deleterious influences of these poisonous forms of substances when well diluted.

As to the solid poisons, I know of only one way to obviate their effect, and that is to avoid touching them, or, if you must touch them, do it always with protected hands. I asked a friend in your profession, the other day, if it was not possible for photographers to avoid staining their fingers with nitrate of silver. Said he,

"No; we are obliged to take hold of the plates, and so on." "But is it not possible for you to devise tongs or forceps, or something of that sort, to use instead of the fingers?" "Well," he said, "that would be possible, but you would have to educate, in a new way, all of the photographers." "Well, then, let the whole profession of photographers be educated in a new method." He told me some instruments had been devised of late years, by which you are enabled to dip certain plates into solutions without touching them, that the artists a quarter of a century ago, or less, were obliged to handle. That certainly is a step in advances.

"But cannot those who manipulate the bichromate of potassium protect their hands?" "Yes, by gloves of rubber or other material; but gloves are clumsy," said he. All that is very true in a person beginning to use them; but I undertake to say that they are not clumsy, and the person who gets used to protecting his hands in this way, will learn to prefer to manipulate in this manner, rather than have eruptions of a skin disease on his hands.

Just how far any improvement in the means of manipulation will hereafter enable photographers to avoid the contact of silver salts and cyanide and bichromate of potassium, I cannot say. But I see people working in certain arts and trades who use various instruments, resembling forceps, very deftly. I have seen boys handling little cards at a printing-press, and using a little pair of cardboard forceps. Goldbeaters use little tongs, or forceps, to handle thin leaves of beaten gold, and nobody would accuse them of being clumsy. Cannot photographers, by a little wit, invent instruments by which they could avoid touching a particle of nitrate of silver with their fingers, and do their work equally as well? If the salts of silver and iodine were avoided, there would be no use for a touch of the solid cyanide, and so you would avoid poisoning in two directions.

I am loth to believe that, if such instruments can be devised and used without detriment to your art, it would be difficult for the photographers to learn to use them and to prefer them. I know it is difficult for a class of people who have become drilled in certain forms of manipulations, to become skilled in other forms; very easily the habits of men become fixed.

A philosopher told me a story, the other day, about printers. When he was a printer, many years ago, an ingenious man devised a case for type that was clearly an improvement over the case that had been used for the last several centuries. This case was devised many years,

many generations ago, some of my philological friends here may tell you how many; the letters were arranged in little compartments, as you know, and there was no letter "J" in the alphabet. Afterwards, when the letter "J" was invented, there was no place in this case to put it; between the "I" and the "K," of course, there was no room, and a rearrangement of the whole thing would not be tolerated by printers, because every one of them would be obliged to educate himself again to the use of this upper case of type, so that "J," a letter that occurs along towards the middle of the alphabet, had to be put down at the bottom, and it has remained there to this day, and neither this man who invented a new case, nor all the ingenuity and inventive genius of this part of the printer's business, have been able to lead compositors to depart from this tradition and learn to use a better thing. I do not think such thing possible among photographers. It is possible to people who pursue trades, but cannot be of professions, for they use the intellect in their labor, and must be forever on the alert for means of improvement of their work and their means of working. So I say of these harmful salts that photographers must use, cease to touch them, or touch them with protected hands, and I believe this is possible to be done.

One thing more. With all the care you can exercise, perhaps some of you may experience slight chronic poisoning from these agents. How can you avoid or counteract such effects? The best way is to pursue a course of what I will call the best possible personal hygiene. Constantly inhaling a stimulant, photographers should take as little of other stimulants as possible. [Applause.] I am very glad that this is so thoroughly approved, but I suspect that some may think alcoholic stimulants alone are meant. I do, to some extent, mean alcohol, but any individual who is constantly absorbing ether, should partake sparingly of what are supposed to be perfectly harmless stimulants. He should eschew his tea and coffee if he can; and while tobacco is not a stimulant, and to a healthy person, in moderation, is not harmful, to one who is obliged to absorb steadily such drugs as ether, tobacco is a harmful agent. He who would keep his body in the best condition of health through life—who is obliged to be exposed to these gases—must omit to a much larger degree than is the custom in our society the use of tea, coffee, tobacco, and alcohol. No agent can be taken into the body to counteract the influence of these stimulating drugs; you cannot have one stimulant to kill another; do not think, by taking tea or coffee,

that you are going to counteract the effect of the ether; such a thing is impossible.

As you are taking into the system unnatural substances, avoid, as far as possible, all other unnatural things. So far in reference to stimulants, and, I might say, in reference to condiments, that they ought to be classed with the stimulants. A photographer exposed to the fumes of ether constantly should avoid the free use of cayenne pepper and other strong condiments.

The photographer is obliged by his business to indulge in very light labor; he should supplement this with vigorous, systematic, physical exercise; he might even indulge in athletic sports—play base-ball, swing Indian clubs or dumb-bells, or lift at a health-lift machine. A photographer, or any person who works in such a laboratory, or among such agents as you do, ought, during the hours not employed in business, to be out of doors in the free air as much as possible. A distinguished chemist has told me that it is impossible for him to maintain his health when working in his laboratory many hours a day continuously for several weeks. When he can get out and spend most of the time in the open air for a day or two, he notices at once its exhilarating influence. Close laboratory work brings disturbance of his digestion, lessening of strength, sleeplessness, and general nervousness. His experience is the experience of the hard-working photographers. They should be in the open air as much as possible; partake of wholesome, unstimulating foods; they should indulge in vigorous exercise.

By avoiding, then, all contact with the poisons as far as possible; by diluting the gases, and taking all pains possible to develop strength, and get good recreation when out of the laboratory; and by the avoidance of all unnecessary and unnatural stimulation, I believe the profession of photography ought to be among the most healthy in the land; the notion that it is an unhealthy profession ought not to exist, and there ought to be no ground for such a notion.

One word more. I know that photographers, as a rule, are chemists. A good photographer must be a good chemist. I am glad to be informed that among the profession the study of chemistry is more and more engaged in, and that photographers are rapidly becoming adepts in practical chemistry; and I am sure that as the knowledge of chemistry—not to say physiology—becomes still more wide-spread, the value of these truths of hygiene will be more and more appreciated, and the sanitary dangers of the profession of photography will grow less and less as the years go by. [Applause.]

AN ESSAY ON THE EDUCATION OF THE EYE

WITH REFERENCE TO PAINTING.

BY JOHN BURNET, F.R.S.

(Continued from page 281.)

HARMONY OF COLOR.

THE power of combining sounds whose united influence shall call into existence, through the medium of the ear, those latent seeds by which the violent or tender passions are excited, is too well understood to require explanation. That there exists the same sources of enjoyment in the human mind, which are capable of being awakened through the medium of the eye, is equally certain; otherwise, the painter could not produce, by a combination of color, those effects which surprise or delight the spectator. Locke describes colors as only ideas of the mind apprehended by the imagination, and not qualities that have any existence in matter. Newton says, colors have their origin in the different refrangibility of the rays of light, and are not received from reflections or refractions from natural bodies. Without, however, entering too minutely into the philosophy of colors, it will be necessary to inquire what are the colors which affect the eye most, or from what arrangement harmony arises. We observe that children and rude nations are most attracted by strong colors, from the excitement which they produce. De la Hire says, "the different degrees of excitement produced by colors may be observed by keeping the eye shut, after looking at the sun or any luminous object, for the image left upon the retina will be first red, then yellow, then green, and last of all blue." We also perceive that the effect produced by strong colors may be increased or diminished, by bringing them in contact with others of an opposite hue; large portions of strong blue coming in contact with red or white (for we find the ground color often a great cause of opposition) affect the eye in a different manner from what the same colors produce when in smaller quantities; or on a ground of a neutral tint, such as we see in the specimens found in the Egyptian tombs, contrasted with the same colors distributed over a Persian shawl: in

the latter case, the rays coming to the eye from every separate color, cross each other, so as to produce an agreeable harmony. In the former case, one color makes too strong an impression on the eye to be obliterated easily; impressions remaining of long or short duration, according to the intensity of light or brightness of the object producing them. Reynolds mentions three modes of harmony existing in the arrangement of colors; one where the colors are of a full and strong body, such as we find in the works of Raffaele, and which he denominates the Roman manner; another, the Bologna style, which mixes several colors together, so as to produce a general union in the whole, without reminding you of the original colors of which they are composed, and which is carried to the greatest perfection in the small works of the Dutch school; the third is the Venetian, where the brightest colors are admitted, with the two extremes of warm and cold hues, and the whole reconciled and harmonized by being dispersed over the picture, presenting to the eye that sensation arising from a bunch of flowers. Each method seems to have its peculiar province allotted to it, corresponding to the subject or style of composition, in the design, and chiaro-oscuro, according as they depart more or less from common representations of nature, or retain an entireness or severity of outline: harmony arising from a corresponding agreement of the several parts, we can easily imagine a suitableness in the coloring to preserve such unity. In the early stages of painting, when the figure possessed a dry continuous outline, we find the colors laid in strong and bright, so as to give relief unconnected with the effect of aerial perspective. As the art advanced, we find colors made use of in the character of chiaro-oscuro; and when foreshortening and perspective effect occupied a large share in the conduct of the work, we perceive that color became more subordinate, and the outline, light and shade, and color, assimilated with each other in producing an effect upon the spectator arising from neither having a preponderance in claiming his attention. In entering upon a diffuse examination of the foregoing remarks, each separate division would require a lengthened essay to particu-

larize the way in which the eye receives delight from the various modifications of color: a work of this brief description can do little more than point out where the various examples are to be met with, and how they are modified and arranged to harmonize with those sensations which exist in the mind, and cannot be altered or diverted into other channels by the caprice or false taste of any one. I would fain hope I have gone further. I have endeavored to prove that those sources of enjoyment which lie dormant in the human mind, and which through the sense of sight are vivified and called into operation, can only, by the cultivation of that sense, be productive of pleasure. I have also endeavored to prove the great utility of the education of the eye, as a means of general instruction, giving employment to thousands, while it opens those avenues to science, which even to the great power of language remain as "books sealed and fountains shut up."

(To be continued.)

OUR PICTURE.

WE relieve our readers, this month, from the tedium of sameness in general photography, by giving them a bright little gem of art, entitled "The Little Brother." It was copied from a painting by Meyer von Bremen, the famed German artist, and gives us a study upon which we all may dwell with pleasure and profit.

If those who have read Burnet's essay on *The Education of the Eye* (republished in our present volume, in monthly parts) will compare the rules of composition, harmony, light and shade, etc., there laid down, with the illustration before them, they will see how the artist has followed and carried them out in every respect. In the grouping of the figures, the lighting, the harmonious accessories, all in all, we discover a composition full of natural grace and sweetness, bending all through to art principles. The model is one which almost any photographer could follow in his studio, the proper subjects being given.

Meyer von Bremen is too famous an artist to need eulogy from us. His pictures are famed everywhere. They are studied

by artists, old and young. The painting from which our illustration is copied is valued at several thousand dollars, and was kindly loaned to us for this purpose by the owner, Mr. Charles L. Sharpless, Philadelphia, Pa. We used the negatives in their original purity, without "doctoring" or working up, save a little retouching of the flesh, to do away with the coarse effect of the painting. This work was done by the talented negative retoucher Mr. Barthold Meyer, of Chicago. See his advertisement in "Specialties."

During our late visit to the Convention, we met Mr. Meyer, and examined many specimens of his work. We feel safe in saying that few retouchers can surpass him in the feeling and delicacy with which he uses his skill in this department. In retouching the faces in our negatives, he in no wise altered the artist's intention, but preserved the lovely expressions intact.

The negatives and prints were made in the *Philadelphia Photographer* work-rooms.

OBITUARY.

MR. SAMUEL BROADBENT.

MR. SAMUEL BROADBENT died on Saturday, July 24th, at his residence in Philadelphia, in the seventieth year of his age. Mr. Broadbent was a native of Weathersfield, Conn. In his early life he was engaged in merchandizing, but his taste for fine art soon enlisted him in more congenial employment. He studied and practised portrait and miniature painting with much success, until his friend, Prof. Morse, brought to his notice the wonders of the daguerreotype process, which Morse had just brought from Europe. Mr. Broadbent took immediate hold of this new enterprise and presented it with remarkable energy, first in the South, afterwards at Wilmington, Del., and finally settling in Philadelphia in 1850. Since that time, in the department of photographic art, Mr. Broadbent has been well known to the present generation of Philadelphia. He was more than a merely successful man. Although by nature shrinking from publicity in the matter of his benefactions, many can testify to relief furnished

by his kindly hand, which never stayed when a suitable case was presented. Many a struggling artist will recall not only such material aid, but, what has often proved of far more importance, the kind tone and hopefulness of suggestion, which helped him to help himself. From the business walks of life, wherein he was much esteemed, and the social walks, wherein he was esteemed and loved, he passed peacefully away.

The business of Broadbent & Taylor will be conducted as heretofore, without change of name or location; Mr. Taylor remaining in the house with which he has been identified for eighteen years, and Mr. S. W. Broadbent, who has been with the establishment for three years, will continue in it.

MR. CHARLES PAXSON.

MR. CHARLES PAXSON passed to his reward in the life beyond, on the 6th of July, in his thirty-ninth year, after twenty years of untiring labor, which undermined his health and left him feeble. Day by day he sank, until the last spark of life was gone, but his memory lives with us still. In health he was genial, kind and sympathetic, to which those who knew him best can testify.

He was one of the pioneers in solar-printing. He devoted himself, with enterprise, to business for nearly twenty years, in the cities of Chicago and New York, and achieved a reputation for the excellence of his work that was surpassed by none.

The business has been ably conducted for the past three years by his former partner and brother, Isaiah Paxson, who has determined to continue the same at the old stand, corner of Broadway and Houston Street, New York.

EXPERIMENTS WITH VOGEL'S EMULSION DRY PLATES.

BY H. HARTMANN.

HAVING received from Prof. Vogel some already prepared plates, we proceeded to test the same, and first proceeded to totally uncover the yellow daylight of the dark-room, and to replace the customary orange-colored panes of the lanterns with some of ruby glass. Our first aim was to establish

the degree of sensitiveness of the new preparation.

The model was placed at the darker side of the studio, which faces with its glass front almost due north; and two images were taken on a wet plate, with thirty to forty seconds' exposure (Dallmeyer 2½ inch focus, stop No. 2). Both made good pictures, and the latter a perfectly soft picture. Immediately afterwards, Prof. Vogel's emulsion was exposed fourteen to fifteen seconds. The result seemed to point to over-exposure. A second plate, with ten to twelve seconds' exposure, produced a stronger picture. It had been exposed exactly correct. The *carte-de-visite* apparatus of Dallmeyer was now replaced by a "cabinet head" of Voigtlander, a somewhat larger half-length picture adjusted, and we obtained very satisfactory results with eighteen to twenty seconds' exposure.

A plate prepared with the wet process, with the same length of exposure, became too hard, and required fifty-six seconds for a soft picture, without giving all minute details of the shades contained in the dry plates. The intensifying with mercury, as well as the fixing, was done rapidly and easily. The plates dry much faster than the usual wet-collodion silver plates, and they were in a very short time ready for the retoucher, without having been varnished. The first pictures gave harmonious, but, on the whole, dull pictures. As the yellow tone imparted to the negative by the mercury intensifying is very hard to be defined, these had not been intensified sufficiently; but entirely satisfactory was the white, the right character of the hair, and the extraordinary softness of all the half-tones.

On a forenoon, a couple of days after the foregoing experiments, we proceeded again, and with seven seconds the plates were found perfect. Intensifying the plate with a solution of pyrogallie acid, with following addition of silver, before the mercury intensifying, made the plates ready for printing, so that strong and effective copies could be taken.

On the third day, the picture of a child, with a pretty wild dog, was taken in about one second. The picture was soft and perfectly strong after intensifying.

In experimenting on an oil painting, the exposure of a wet plate took four minutes, where a Vogel's dry plate was done in one minute and forty seconds.

Taking everything into consideration, the following facts seem to be established:

1. The sensitiveness is at least three times greater, as compared with the wet plate.

2. The getting ready of the exposed plate does not take as much time as the gelatin-emulsion plate requires.

3. The correctness of the toning is very satisfactory, with judicious exposure, all the plates having a harmonious and soft character.

4. It appears that, by correctly determining the proportion of ammonia or bromide of potassa in the developer, minor defects of exposure may be corrected, with proper care.

5. To manipulate correctly the mercury intensifying is very difficult; but by a previous silver intensification, a gray (not yellow) appearance of the layer, quite similar as the appearance in the wet plates, may be obtained, by which the consistency is easier controlled.

GERMAN CORRESPONDENCE.

English Photography.

SINCE writing to you last, I have made a flying trip to England, where I saw many things highly interesting to the photographer, and which can be better estimated and examined *in loco* than at home, with a necessarily inexhaustive description as a sole guide.

As everybody else, I was most impressed by the weather in England. We had east wind, and, as a consequence, a thin fog prevailed permanently; the sun was invisible all the forenoon, and only in the afternoon he made a few sickly efforts to penetrate the obstinate fog, which, however, always managed to come off victorious from the battle. Perhaps this kind of weather was abnormal even for England, but the queer light—if I may call it so—which prevailed, irritated me at last to such a degree, that, in my photographic experiments, I made a gross mistake in the time of exposure.

The light was dull, not brilliant, as in the

south (not to speak of the light of the beautiful American sky), and as dull as the light appeared the negatives obtained in the studio; and under these circumstances, I honestly believe that portrait photography in England is a great deal more difficult than in Germany, France, and America, the more so, as the thin fog which I observed often becomes an opaque mass in November.

As Mr. Mayland, the well-known photographer in Regent Street—who makes such excellent pictures of children—told me, it is then impossible to make a print. They often have to wait four to six weeks, till the light is appropriate for printing; and they have been obliged to have recourse to a singular expedient in case of orders which allow no delay, namely, the employing of paper from Ranzel, which is placed silvered in the market, and is said to be so sensitive that it prints with gaslight.

If, now, the foggy atmosphere, especially in the smoky London, offers no advantage to the portrait photographer, it is, on the other hand, the more valuable for landscape-ing.

England is celebrated for her landscape photography. She has maintained the first place in this branch at all international exhibitions; and she owes this achievement not alone to the charming scenery old England abounds in, or to the eminently chaste taste of her artists, but also to the peculiar light—subdued through a soft haze—which softens the otherwise too great contrasts between light and shade, adding an especial charm to the distant parts by aerial perspective.

I called on Mr. Robinson, in Tunbridge Wells, an artist *par excellence*, who is equally excellent in portrait and landscape photography, and whose pictures have received more than fifty medals at different exhibitions. He showed me some of his new *genre* studies (figures in landscape), which, in regard to perfect harmony, could not be excelled; being, in fact, masterpieces of artistic taste and consummate skill in execution. At the same time, I had occasion to admire the highly romantic environs of the place, which are justly celebrated for their beauty.

It is obvious that, in a country where the

conditions of light are not much favorable for portrait photography, and where, on the other hand, charming scenery in yet more charming illumination offers every inducement to landscaping, the dry plate is a great factor. England was therefore the country in which the dry plates became favorites at once, and the trade in gelatin plates is flourishing there to such an extent that a large part of the Continent is furnished with plates from there.

In America, you may enjoy enough light to enable you to use, in most cases, the wet process to satisfaction; but in England, they often do not have light enough even in summer; and under such conditions, a process which works three times as fast as the wet process is, of course, of especial value. I say *three times* as fast, for the statements met with in English advertisements, declaring the sensitiveness of the gelatin plates to be ten, aye, twenty times greater than in wet plates, I deny to be based upon facts. Where a thoroughly worked out portrait picture, with sufficient details also in the shades, is desired, even with the best gelatin plate the exposure will hardly be taken shorter than with a wet plate. One kind of dry plate (Nelson's) appears to be more sensitive, it is true; but this may be due to the strong developer employed by Mr. Nelson, which acts favorably, not alone upon his plates, but also upon other plates, as, for instance, even upon those prepared with my new emulsion.

Mr. Robinson, who examined my plate, and was not quite satisfied with my developer, drew my attention to Nelson's developer. He developed, with my plate and Nelson's developer, a better picture than I obtained with my own developer—a picture of really surprising intensity and clearness in the shades.

As this developer acts certainly as favorably upon other plates, and its formula may not be generally known, I give you the same herewith.

No. 1.

Pyro.	1 ounce.
Alcohol,	7 ounces.
Water,	3 "
Sugar,	1½ ounce.

No. 2.

Liquor Ammonia (strong), .	8 ounces.
Water,	2 "
Bromide of Ammonium, .	1½ ounce.
Sugar,	1½ "

Mix one drachm of No. 1 with one-half drachm of No. 2, and three ounces of water.

For developing my plate, the addition of some little bromide (1¼ ounce) is of advantage.

The sugar in the developer certainly keeps the shades clear. With no other developer did I obtain such prompt effects.

Among other photographic matters in England, the employment of artificial light interested me very much. For America, artificial light may be of very little interest, as, even in the worst part of winter, there is always plenty of light; but, nevertheless, I believe that even there the matter deserves some attention, for there is money in it.

Two different sources of light are now in practical use in London—the Indian white light and the electric light; and, to begin in a business-like manner, I will state, first, that Messrs. Adler & Co., No. 9 Strand, London, who employ the white light, made a very good business last winter at fancy balls, where the public took special delight in having their pictures taken in fancy costumes, which is, of course, much more agreeable than going to the drudgery again of putting on the fancy costume during the daytime, at the studio. At one fancy ball alone, the said artists took more than fifty pictures; and I am convinced that this branch will become quite in vogue in time.

For such takings, only one room is needed, in which the white-light apparatus (called luxograph) is placed. The same consists of a lantern of blue glass, with chimney for the smoke. This lantern stands in the focus of a large parabolic mirror, put together mosaically of separate pieces of even mirror-glass. The mirror has a diameter of about 4½ feet, and is fixed at a height of about 5 feet, in such a way that its axis points obliquely downwards, exactly upon the person to be photographed.

The aperture of the mirror is covered with tissue-paper, in order to soften the direct effects of the light. Above the mirror,

a row of gas jets is projected, the light from which serves for exact adjustment of focus, after which a quick-working dry plate is placed in the camera, and the white light burned off. The time of exposure is four to six seconds; and, if nothing else, the contrivance is simple and not dear. The pictures are scarcely inferior to pictures obtained with wet plates.

More effective, but dearer withal, is the electric light, which is employed at present by Van der Weyde, in Regent Street. The same can, perhaps, be conducted also to other localities, by changing the light-machine in a locomotive; but, in all cases, the transportation would offer more difficulties than are met with in the luxograph.

Two years ago, already, the pictures obtained by Van der Weyde with electric light were exhibited at Paris—half-length pictures mostly. Since that time, the works of that gentleman show marked improvement. He now makes not alone full-length, panel, and boudoir pictures, but takes also groups with such effectiveness that they are fully equal to any pictures taken in daylight.

His apparatus is fixed so as to prevent the electric light from falling directly upon the person. The light, which is furnished by a Siemens's machine of 1200-candle power, falls in the focus of a small concave mirror, the back of which points to the person to be photographed. The rays, reflected from this small mirror, fall upon a large concave, round reflector of white paper of six feet in diameter, which illuminates the person with its diffused light, by which all glaring lights and shades are avoided. The whole reflecting contrivance is suspended from a frame fastened on the ceiling of the room, which may be turned so that the rays of the diffused light fall obliquely, laterally, from the front, upon the person. Of course, backgrounds and other accessories can be employed.

Van der Weyde has already found many followers. Liebert, in Paris, France, employs electric light, although he has hardly the excuse to be found in the foggy atmosphere of London.

Levitzky introduced it also in St. Petersburg, where it certainly proves a boon, as,

in winter, the daylight there lasts scarcely three hours.

Furthermore, it is of decided advantage to have the choice of any room on the first floor, instead of being forced to fix up the studio in the third, or, as in Paris, on the sixth floor.

Van der Weyde also uses English gelatin plates, and the silver bath is a thing of the past in his studio.

More in my next letter.

Yours truly,

DR. H. VOGEL.

PARIS, August 31st, 1880.

FRENCH CORRESPONDENCE.

Important Advance in the Use of the Gelatin Negative Process—Desirability of a Substitute for Gelatin in Rapid Emulsions—Dr. Vogel's Emulsion of Gelatin and Gun-Cotton—Summary of the Patents recently taken out in France for Photographic Inventions—Uselessness of the greater number of these Patents—Sale of the New Woodbury Process to Mr. Hutinet—Last Meeting of the French Photographic Society, and the Vacations—Complete Description of the Gelatino-Bromide Process, by Mr. Bascher.

DURING my travels in this season of vacation, I utilized my visit to several towns in the south of France, to acquire the proof that the tendency to use gelatin emulsions is becoming stronger every day, and in the development of this process we must not only consider the love of progress, but also the part taken by the manufacturers of gelatino-bromide silver plates. There are so many of these in France, and in neighboring countries, that in order to sell their products they are forced to use all their efforts, and those of their agents, to show to amateur and professional photographers all the advantages of using rapid dry plates, sold ready for use, that will not spoil by keeping, and the price of which is quite moderate, as for little more than a dollar (6 francs, 50 centimes) you can buy a dozen of plates 13 x 18 centimetres (5 x 7 inches), including the cost of the glass, and of the box which contains them.

From the American journals, it does not

appear that this remarkable process, notwithstanding its defects, which are mostly due to its qualities, has made much progress. Perhaps the use of gelatin renders its application more difficult in warmer countries than in those of Europe; but it seems to me that, observing certain precautions to avoid the effects of heat upon gelatin, it might be possible to use everywhere in America, as well as with us, the gelatino-bromide process. Moreover, it appears fully demonstrated that it is possible to use as a vehicle of a very sensitive substance some other body besides gelatin, and to form films offering much more resistance to heat than those made from this organic matter, which is so irregular, so capricious, and of which it is often so difficult to analyze exactly the nature, as is done for other chemical compounds.

It is now a question of a new emulsion perfected by Dr. Vogel, in which gelatin is still used, but also pyroxylin, or gun-cotton. I suppose that the intelligent readers of the *Philadelphia Photographer*, who take great interest in photographic novelties, would like to know the details of this new emulsion, which my eminent colleague of Berlin wrote to them about in his letter of May last. The new Vogel emulsion has been patented in France, and we extract the following passages from the specification of the patent.

"The watery emulsion of gelatin," says Dr. Vogel, "containing bromide of silver, presents the objections of decomposing very rapidly, of drying very slowly when it is poured upon the plates; moreover, it increases the tone, and is washed with difficulty." To make his new emulsion, the inventor uses gelatin containing bromide of silver (or else chloride or iodide of silver mixed) in combination with pyroxylin. If we add ordinary collodion to a gelatin emulsion, the matter held in solution will be precipitated in a flocculent condition.

Dr. Vogel has succeeded in obtaining a perfectly homogeneous mixture by using a solvent capable of dissolving at the same time the bromide of silver, the gelatin and the gun-cotton. Among the solvents producing this effect are the divers organic acids, that is to say, the inferior compounds

of fatty acids, such as formic, acetic, etc., as well as their derivatives or their mixtures, alone or with methylic or ethylic alcohol, etc.

Dr. Vogel has proved that the gelatino-bromide of silver may be dissolved by these solvents without precipitating the silver salts found in it, and that, contrary to preceding experiments, the phosphatic products of these salts were not essentially modified by the presence of the acids. He also found that the properties of gelatin emulsion are increased in the solution, insomuch that the product thus obtained does not offer the objections of the watery emulsion. In short, its properties, by its combination with the gun-cotton, are much improved.

Among the methods to be used, Dr. Vogel gives the following combination: Take a gelatin emulsion made by the ordinary process, and then dry it by means of a current of hot or cold air, or by any other means that will draw off the water. This dry gelatin bromide of silver is now dissolved, after heating in one of the acids mentioned above. The quantity of acid to be used depends upon the solubility of the gelatin; it is necessary, therefore, to make a trial of each kind of gelatin. This part is difficult, and puzzles all but the expert. This acid emulsion is now used alone, after alcohol has been added to it so as to give it the desired consistency; or it may be mixed with the gun-cotton, which has been dissolved in a mixture of the acid and alcohol; the most suitable proportion of gun-cotton is about one per cent. of the quantity of acid emulsion used.

According to the published intentions of Dr. Vogel, he is preparing to use industriously this new process. This will be another cause for the extension of the use of rapid dry plates. We cannot judge personally of the results obtained by this new combination, but they cannot be other than those made known by the scientist, who has obtained and experimented them with his well known skill. Here is a great progress made, thanks to which gelatin will be mastered in some degree at least, since, according to Dr. Vogel, this kind of emulsion no longer presents the objections of ordinary emulsions worked up to the present with bromized gelatin. We still

hope, however, to see the day when gelatin will be no longer used in negative sensitizer coatings.

This invention of Dr. Vogel has been patented, and, whilst on the subject, we ask permission to say that we have great difficulty in understanding the reasons for which in France, and doubtless elsewhere, patents are taken out for which there are no good reasons. We will abstain from mentioning any names, as caution is necessary in so delicate a matter, but, speaking in a general manner, we cannot but express our astonishment that patents should be taken for processes known to all the world, that contain no improvement whatever, nor have any special application. We have just examined the specifications of patents taken out in France during the last few months, and if there are some containing new ideas and new applications, veritable inventions in a word, they are not numerous, and one is struck with the ignorance which characterizes the descriptions. What can be the object, except to pay into the government coffers important sums of money, without any benefit to the so-called inventor? It is very certain that in creating this tax on public ignorance, our legislators have been very successful, and a large deficit in the revenue from patents would be obtained, if, before being granted, they were previously examined to ascertain if the idea had any value, if the object is not already well known, and if it has not already been patented. It would take up too much space to mention here all our French patents; it would only be sufficient to read them to our colleagues, who are well posted in the actual condition of photographic progress, to convince themselves that the greater number come from a shop in which the old is taken to make up the new.

We certainly have no intention, in all that we have said, of alluding to the perfectly valid patent taken out by Dr. Vogel. This is unquestionable; it has for basis a scientific truth, proved and experimented with by a distinguished scientist, and it will be readily conceived that the author of this invention, which consists of the mixture of bromide gelatin and gun-cotton,

wishes to secure legal ownership of this process, and have the benefit of the protection conferred by a patent. But what is the use, for example, of patenting an emulsion containing more or less alcohol? Why take out a patent for introducing into gelatin a metallic oxide in powder instead of a combustible powder, and this under the pretext of applying the carbon process to enamels? Why patent, to cite a last example, the use of any tissue placed between the negative and the sensitized bichromatized coating, in view of a typographic application? But we would never stop if we wished to continue this critical review of the patents recently taken out in photography.

The recent process of Mr. Woodbury, mention of which was made in my letters, has just been sold for France to Mr. Hutinet, well known to the photographic world. This, we think, a very good thing for Mr. Woodbury, whose patient and skilful investigations are worthy of being encouraged and sustained by an appropriate and pecuniary success, and it is also a guarantee for the future and expansion of this process. It will have to be worked, and as it is a good one, a great service will be rendered to the photographic art in general, and, above all, to the special art of permanent impressions.

On August 6th was held the closing meeting of the French Photographic Society; no other meeting will be held before November. Nothing very important was produced at this last meeting, at which but few members were present.

Some interesting prints were presented from Mr. Wm. Cobb, of Woolwich, who was represented by the Hon. Mr. Stebbing, recently named by our Minister of Public Instruction, if I have not already announced it to you, Officer of the Academy, as a reward for the professorship which he has held for many years, and with so much distinction, in the Philotechnic Association. Messrs. Ciriale and Dufardin also presented some prints, and Mr. Henderson, through our friend Stebbing, a pair of spectacles to be used in the gelatino-bromide process.

As is well known, it is necessary in these manipulations to work in an obscurity rela-

tively very great. On coming out afterwards into full light one experiences a daz- zling which, often repeated, might occasion serious disorder in the functions of these precious organs. Mr. Henderson has constructed spectacles which may be covered with smoked glass, so as to diminish, in coming from the dark-room, the intensity of the light. At will, these smoke glasses can be lowered on the side or on the white glass of the spectacles, according as we wish to see plainly, or to diminish the light; moreover, the rim of the white glasses is furnished with a fine metallic gauze, which fits in the cavity of the eye. Mr. Henderson has been well inspired in devoting himself, with so much success, to the means of preserving the eyes from the injurious effects which have been experienced by many operators who have been obliged to remain for a long time in laboratories almost entirely obscure.

Mr. Bascher has just published the method that he follows with success in the use of gelatino-bromide. I send to our editor of the *Philadelphia Photographer* a copy of this pamphlet filled with precious information. He will thus be enabled to give information to those who wish to procure this publication.

LEON VIDAL.

PARIS, September 1st, 1880.

HOW GOOD PHOTOGRAPHERS WORK.

BY THEMSELVES.

(Continued from page 240.)

REPLYING to your questions, I would say:

1. I have a Liebig distilling apparatus, not only for pure water but also for alcohol. It is a necessary piece of apparatus in every gallery. When away from home and in want of water, the best way is to set out clean pans, high enough from the ground so no dirt can get into them, and far enough from houses and trees so the rain will fall directly into them. Ice from large ponds or lakes will do, but that from small bodies of water contains too much organic matter.

2. I never had much trouble with hot weather. In a few instances I have wrapped

wet cloths about the collodion-bottle and bath-holder, which answered all purposes.

3. Bath.

Silver,	35 grains.
Water,	1 ounce.

Collodion.

Alcohol,	$\frac{1}{2}$ ounce.
Ether,	$\frac{1}{2}$ "
Iodide of Ammonium,	5 grains.
Bromide of Cadmium,	2 to 3 "

(According to conditions.)

Anthony's Snowy Cotton	5 grains.
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Developer.

Sulphate of Iron (my own make, fresh and good),	1 ounce.
Acetic Acid, No. 8,	1 "
Water,	16 ounces.

4. I took a lot of blotting-paper, cut it to the right size, wet it in a thirty-grain solution of carbonate of soda, dried, and bound into a book. When the silvered paper is nearly dry, put between these leaves, and use at your pleasure in a week or two.

5. Wash the prints through three waters (a gallon to each washing for six sheets will answer); then to the fourth gallon add an ounce of acetic acid; move about for ten or fifteen minutes, and wash in three more changes. From the seventh change tone and wash in gallon number eight; fix in hypo, one to eight; wash twice, then place in saturated solution of alum ten minutes, moving about all the time; wash in two more changes of water, making twelve gallons or changes; then take all out in a pile, press out surplus water, paste, and mount. Of course, in this process, it is necessary to handle the pictures over and over by hand, taking pains to shake the dish now and then, leaving them in each change five or ten minutes.

6. I pass.

A very small quantity of water will also clean a negative, if, after developing, only a little is poured on; then move it about on the plate by rocking; then add more, and so on, till the water takes well. Clean with cyanide, then use but little water again, only take time instead, and carefully rock back and forth before letting it run off. In this way, when short of water, I have made eight stereo. negatives with a quart, ready to varnish.

R. E. WOOD.

FROM A. B. COMSTOCK, WAVERLY, N. Y.

In reply to your six questions, I will submit the following:

1. In cold weather I use distilled water, in summer, ice-water. The distilled water I distil in a home-made distiller, used on any stove, which is the reason I use ice-water in summer. Never saw any material difference in the result between the two.

2. By ventilating my dark-room, and using ice in the box where I keep my bath, which is made large enough for the purpose.

3. My silver bath I make forty grains strong, with distilled or ice-water, iodized with plenty of iodide silver, and made slightly acid with C. P. nitric acid. My collodions are different from any formula I have ever seen in print; but any one trying them will, I think, be very much pleased; and number one is as good as any lightning process ever invented, when used with a good bath.

No. 1.—Iodide of Ammonium, . . . 3½ grains.
Iodide of Potassium, . . . 2½ "
Bromide of Cadmium, . . . 2½ "
Alcohol and Ether, equal
parts, 1 ounce.
Cotton (Climax, or Hance's
Delicate Cream Cotton), 5 to 8 grs.

No. 2.—Iodide of Ammonium, . . . 2 grains.
Iodide of Cadmium, . . . 2 "
Iodide of Lithium, . . . 2 "
Bromide of Cadmium, . . . 1½ "
Bromide of Potassium, . . . 1 "
Cotton, 5 to 7 grs.
Ether and Alcohol, equal
parts, 1 ounce.

Developer.

Sulphate of Iron, 1 ounce.
Water, 16 ounces.
Acetic Acid, . . . 1 oz. to 6 ozs. Solution.

My silver bath for paper is made as follows:

Water, 1 ounce.
Nitrate of Silver, 50 grains.
Nitrate of Ammonia, 20 "

Make slightly alkaline with concentrated ammonia; float one and a quarter minutes; dry by artificial heat as soon as possible; fume twenty minutes.

To keep the solution in good condition,

use saturated solution camphor occasionally, just before filtering, about one ounce to sixty of silver solution. My printing-room is on the south side of the building, almost directly under the skylight, and is quite small, and as hot a one as any one has, but I have no trouble with paper turning yellow.

5. I wash my prints by picking them over in several changes of water, then soaking several hours, then repeating the operation. I presume there may be better ways of soaking them, but my water supply being limited, I don't have enough to keep a continual stream running through them, as many do when soaking them.

6. Ordinarily, I light my subjects like, or very similar to, position B in the cut in the July *Philadelphia Photographer*; perhaps with this exception, that I use less direct light than represented in the drawing, for I use white muslin curtains, and my light is strong, being a north one. To be successful, there are nearly as many variations to be made in the light when making a sitting as there are subjects; although, I am sorry to say, that too many photographers not only light but retouch their negatives too much alike to attain very artistic results

FROM S. S. HULL, GALVESTON, TEXAS.

I AM no writer, simply a photographer, but am willing to do all I can to assist you in educating the less experienced and beginner. It has always been my opinion that if every one practising photography could do first-class work, it would do more to educate and prove to the public that our profession is not only a necessity, but really an art.

Before going into detail, I would say that there is more in manipulation, and using judgment and care, than in particular formulae. Those I use have probably been published many times, therefore, to give the information required, I will have to go into detail, but will make it as brief as possible.

1. I have found by experience that clean, melted ice answers as well all purposes in photography as distilled water.

2. I take no particular pains to keep any of my negative solutions cool, except my collodion, which I keep in my carbon ice-

box; what will answer as well, take a large covered wooden bucket, put a small piece of ice into it, and set the collodion vials around it.

3. My bath I make thirty-five grains to the ounce in summer, and forty in winter. In making a new bath, I dissolve silver in the melted ice-water to the strength of twenty grains, and evaporate to the strength required; this is better than two weeks' sunning; let it cool, filter clean, acidify with C. P. nitric acid until it turns litmus-paper decidedly red; coat a plate with collodion, let it remain over night; should there be any tendency to foginess, add more acid.

To renovate an old bath, put it in an evaporating-dish; if it will not hold it all, evaporate until you can get it all in, then neutralize with liquid ammonia, then evaporate and fuse; do not be afraid to fuse it too much; fuse until no more smoke arises, and the silver looks clear; cool by stirring, to prevent breaking the evaporating-dish; when cool, add melted ice-water, and proceed the same as with a new bath. A bath treated in this way will always work collodion. I find that most of the leading collodions in the market work well. The formula I use the most is

Ether and Alcohol, . . .	equal parts.
French Iodide of Ammonium, .	5 grs. to the oz.
Bromide of Cadmium, . . .	2½ " " "
Gun-Cotton,	4 to 6 grains,

according to quality; five grains is about right for most of cotton. I use another formula, which is very good for hot weather, and especially for this climate, and works very rapid; to one pound of plain collodion add

Iodide of Cadmium, . . .	56 grains.
Iodide of Ammonium, . .	24 "
Bromide of Cadmium, . .	24 "
Bromide of Potassium, .	12 "

These two collodions work well mixed to suit the desired effect required.

For developer, I use

Mardock's Compound Developer, .	1 ounce.
Water,	10 ounces.
Acetic Acid,	1½ ounce.

is the general rule, but can be modified to suit the taste.

In answering your questions in regard to

printing, and paper turning yellow in hot weather, would say, that this branch of the photographic process requires more experience and care than any part of the business, to produce first-class effects at all times. In the first place, you must have a silver solution of proper strength to work in unison with the paper you are using, which can only be ascertained by experimenting. Float the paper as short a time as possible, to procure brilliant prints; draw across a glass rod, blot immediately between common printing-paper, hang up to dry in a room or box, heat by gentle heat, fume as soon as thoroughly dry, and by this method of working, even in this hot and damp climate, I am never troubled with yellow paper. I will give you my formula for silver solution; I have been asked for it by a number of photographers, and this will answer for all.

Take the amount of silver required for your solution, dissolve it to the strength you wish it in melted ice-water; the strength I use it is fifty grains to the ounce in summer, and sixty in winter, with Hovey's special pink paper; after it is dissolved, add concentrated liquor ammonia to the whole of the solution until the precipitate first formed is redissolved and the solution becomes just clear, and no longer; now pour out one-third of the solution, and add C. P. nitric acid to the two-thirds, until it will redden blue litmus-paper, then add the one-third; then put in one ounce of pure alcohol to each quart of solution, filter, and it is ready for use.

Another good silver solution which I like, and often add to the above, is one ounce of silver, one ounce of nitrate of ammonium, and water to make the required strength. Add a few drops of concentrated liquor ammonia, to make slightly alkaline. In order to get the best results with any silver solution, you must use the greatest of care and judgment, especially in hot weather. First, the paper must not be dry and horny. If such is the case, you must hang in a box with a dish of water under the paper, for a few hours, before silvering; then it must be floated with care. If too short, the prints will have a weak or mottled appearance; if too long, the prints look sunk into the paper, tone hard, and are not brilliant when finished.

The silver solution must be kept the proper strength, to suit the paper. If too weak, the prints look flat and mealy; if too strong, the shadows print too deep, and the extreme black will braze, and oftentimes the surface of the print will literally be covered with small red freckles about the size of a pin-point.

I wash my prints first in water, slightly acidulated with acetic acid—just enough so the water tastes a trifle sour, or enough to redden the prints; wash in two or three other changes of water; tone with a gold solution, made neutral with washing-soda; then add a small quantity of acetate of soda and a little salt; then wash and fix.

Fixing Solution.

Saturated Solution of Hypo, . 1 part.
Water, 4 parts.

After being thoroughly fixed, put them in a strong solution of salt and water, or just strong enough to prevent blistering; then wash.

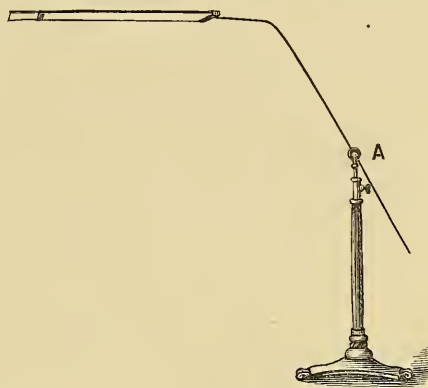
As we have no water here except rain-water, we have to be saving with it. In washing, we have two dishes two feet by two and a half, and the prints are picked, one by one, from one dish to the other, leaving them from five to ten minutes between each change. I consider one and a half hour washing this way as good as all night in running water, and the prints look much more brilliant.

In regard to lighting the sitter, I can hardly do justice to this subject on paper. However, I will do the best I can.

I use the head-screen entirely for bust pictures, and quite often for full figures, and my reason for using it is this: It softens the light, and does away with strong or chalky high-lights, and deep, muddy shadows, as you see by examples sent. It is much more economical in time, as I can light a sitter in one-half the time, and in most instances does away with the side reflector, which, in my opinion, in many cases, if not at all times, injures the picture, and produces false lights, both on the face and in the eye.

I send you a photograph of my head-screen, showing how it is constructed and how used. It is fastened to a common head-rest by a rod of three-eighths iron,

and to the frame. The rod is long enough to raise for a standing figure, or it can be



lowered for a sitting position. The frame is made very light, of pine, two and a half feet by three feet, covered with thin muslin. In winter, when the light is weak, I use tissue-paper instead of muslin. I place the sitter well under the light, then place the head-screen over. If there is too much shadow, I put it farther over towards the side-light, and, perhaps, turn the face more towards the side-light. If the eyes are deep-sunken, I drop the head-screen down as low as possible, so as not to have it show in the picture, and move it to or from the side-light, to produce the desired shadow and high-light.

In conclusion, I would say, with a little practice, almost any effect desired can be obtained by the use of the head-screen. I would say to those who never used it, try it, for the cost is trifling.

FROM ELMER & TENNEY, WINONA, MINN.

Our establishment is heated by steam. To obtain distilled water we attach a glass retort to an air-vent in the steam-pipe, and allow steam to pass into the retort, where it is condensed. This arrangement works the best of any we have ever tried.

When it is impossible to obtain condensed water in this manner, we use the best ice we can get, and let the water stand in the sun a few days, having first placed in it a few grains of nitrate of silver.

For keeping our solutions at an even temperature, we have a large covered box or

chest in which the various silver baths are kept. In one division of this box, and at the back side of it, a coil of steam-pipe is laid. This is used in winter to warm the baths, and we use them at a temperature of about 50° to 60°. In the hot weather, in summer, ice is kept in a separate division of the box. Collodion in use is placed in a tin dish half full of ice-water. It would be difficult to give any formula by which our chemicals are prepared, as we use several different kinds of collodion from formulae which have been published in the journals. Several kinds of collodion, both new and old, are kept on hand, and for average subjects, with ordinary lighting, it is our custom to use from a bottle that contains a mixture of all kinds.

Bath is always about forty grains strong, slightly acid. As a rule, we use large baths usually containing one gallon of solution. When one shows signs of working badly, it is filtered, neutralized, and placed in the sunshine. One bath is kept in the sunshine and two in use.

Ordinary developer is

Water,	. . . . .	64 ounces.
Protosulphate of Iron,	. . . . .	4 ounces.

with acetic acid to prevent uneven development. For children's pictures, we use developer of double the strength of the ordinary.

With a good, strong light, quick-working tubes, inside shutters to the camera-box, and double-strength developer, we have managed to get along without buying any of the "lightning processes." It is a rare thing for us to let a child go out of the operating-room without having secured a satisfactory negative. Have made a good many negatives the past season in from one to five seconds. In some cases it is necessary to redevelop with silver and iron, and occasionally to intensify with bichloride of mercury and iodide of potassium, but in nearly every case we have made good printing negatives.

To prevent paper from turning yellow in warm weather, we add a few grains of alum to the printing-bath, which is made with as few chemicals as possible. Silver, sixty grains strong, usually; a little muriatic

acid and ammonia, enough to make slightly alkaline. After silvering the paper, the bath is placed in an open evaporating-dish, and exposed to sunlight. We find it pays to be extra careful in regard to the dryness and dampness of the paper. It is hung up in a damp room before silvering; after silvering allowed to dry slowly at first, and at last placed in a box over the gas-stove or steam-pipes; afterwards put in the fuming-box, which is also heated by steam.

For washing prints we have a very large tank, into which steam-pipes are placed for heating the water when cold. Under the tank is a deep sink, six feet long and thirty inches wide. This will admit of three wooden dishes, each 22 x 30 inches, and three inches deep. These dishes are provided with pivots, also with fastenings to hold them in place.

The prints are put in running water in No. 1. When the dish becomes full of water the prints are transferred to No. 2, and so on to No. 3, and back again. To empty the water from the dish, it is only necessary to draw the bolt and let the dish turn on its pivot.

After the prints have been fixed in hypo, they are treated in the same manner in another set of dishes. The advantages of this arrangement are that very large dishes are used, which allow a large quantity of fresh water to come in contact with the prints, and by means of pivots the dishes are very easily handled. If our water supply was small, we would use the same arrangement of dishes, and force the water into the tank by means of a force-pump.

We have a very large north skylight, with side-light reaching to the floor. Both top- and side-light are provided with heavy curtains, on spring rollers.

To light the sitter, we allow the rays to fall at an angle of about forty-five degrees, and tone them down by means of a head-screen, if it is necessary. We believe in a good quantity of light, but are careful not to have it too much scattered, and so producing flatness. We work on both sides of the room, according to time of day and style of picture required.

Seavey's backgrounds and accessories are very popular with us, and are growing in demand.

For retouching, we have had for several months one of Gatchel & Hyatt's retouching-machines, and, by its use, have been able to save the labor of one retoucher. The work is done as nicely as it is possible to do by hand. A water-motor attached to the machine furnishes the power by which it runs.

(To be continued.)

THE Association of Operative Photographers of New York, at their last regular

meeting, held at Beethoven Hall, September 15th, 1880, elected the following officers for the ensuing term, commencing with October:

President, Charles Coffin; Vice-President, Charles Schaidner; Secretary, A. H. Atwood; Treasurer, Victor Acker.

A. H. ATWOOD,

Secretary *pro tem*.

All correspondence and communications must be directed to the Secretary, 523 East 117th Street, New York.

Editor's Table.

THE New York *Daily Graphic*, September 2d, gives a very excellent portrait of Mr. A. J. W. COPELIN, Secretary of the Photographers' Association of America. We clip the following from the *Graphic*:

"MR. COPELIN AND THE PHOTOGRAPHERS.—The Photographers' Association, which held its Convention in Chicago last week, comprises nearly all the photographers of note in America, and its Secretary, Mr. COPELIN, whose portrait we give here, is one of the leading men in furthering photographic progress. The *Graphic's* readers have seen his name many times under reproductions of photographs of notable events occurring in Chicago and vicinity, he being the best landscape photographer in that city. He is imbued with the true scientific spirit, and, unlike some of his brethren, he regards the illustrated newspaper as his ally instead of a rival, as he very eloquently and tersely told the Convention when he announced to them the fact that the *Graphic* would give illustrations of their doings. The *Graphic*, he said, more than the slow weekly illustrated papers, took an interest in photography, and in the welfare of photographers. He urged all those present to send views of important occurrences to the *Graphic*, as he had done for years. They would find it to their interest to do so, as he had found it. In fact, he spoke of the *Graphic* in terms which the *Graphic* is too modest to reproduce. The members of the Convention agreed to furnish the *Graphic* with all the photographs of everything worth illustrating in its pages, and by unanimous action the *Graphic* was made the illustrated organ of the National Photographers' Association of America." This last is not true.

THE *Photographic News*, August 20th, records the death of Mr. MUNGO PONTON, who died on the

3d instant, at Clifton, England. To Mr. PONTON belongs the credit of first discovering and applying to use bichromate of potash as a printing agent in photography. He was also the founder of printing in pigments for permanent photographs. As an inventor and discoverer, he therefore takes rank with the pioneers of our art—NIEPCE, DAGUERRE, and TALBOT. And in our scientific world his loss will be deeply felt.

WE make record of the following:

"CHICAGO, August 3d, 1880.

"DEAR SIR: Early in the year, we distributed to our patrons the circulars of R. ERNESTI & Co., solar printers.

"We find that the firm are not dealing honorably with the fraternity, and desire now to advise you that any business you do with them must be at your own risk, without any suggestion or endorsement from us.

"Thanking you for your past favors, we invite your future commands, striving always for the best interests of our customers.

"Fraternally,

"DOUGLASS, THOMPSON & Co."

THE Oakland, Cal., local paper gives a glowing description of the new photographic establishment of Mr. E. D. ORMSBY, which that gentleman has lately thrown open to the public after several months spent in rebuilding and furnishing. We hope the Oaklanders will prove their appreciation of Mr. ORMSBY's efforts by giving him their most liberal patronage. With the description of the gallery comes a fine cabinet portrait.

MR. O. P. SCOTT, Quincy, Ill., has also just completed a fine new photographic studio, to which he invites old and new customers, promising full satisfaction to all. The Quincy local

paper gives a lengthy description of the new rooms.

WE lately received a visit from Mr. A. J. BUSHNELL, of the Lithotype Printing Company, Gardner, Mass. Mr. BUSHNELL had with him a fine selection of specimens of their work. The prints are produced from a photographic negative, with fine printing-inks, by new and improved processes, some of which are claimed to be original, and exclusively controlled by this Company.

THE "Ohio Platinum Company," Akron, O., send us their circular and price list for solar prints. The firm make only platinum prints, for which they claim absolute durability. They offer to send specimen prints for chemical tests on receipt of twenty-five cents.

MR. HIRAM J. THOMPSON, 259 Wabash Avenue, Chicago, offers for sale a new article, called "calcined flour," for grinding negatives for retouching. It is put up in little boxes with perforated tops, thus placing the supply to be used under the control of the retoucher, at the same time sifting it out free from lumps or coarse grains.

Nos. 7 and 8 of the *Photographers' Bureau of Information* for August and September are received from Messrs. DOUGLASS, THOMPSON & Co., Chicago. These little leaflets are doing a good work, and during the Convention were in great demand. The *Bureau* serves as a useful medium between employers and employees.

A COPY of the Constitution and By-Laws of the Iowa Photographic Association lies before us. The opening "Preamble" is as follows: "Believing that in union there is strength, we, the undersigned, photographers of Iowa, have agreed to form an Association for the mutual benefit and protection of each other." Then follow the rules of the Constitution and the By-Laws, closing with a fixed price-list for all work issued by the members of the Association. We believe this movement to be a good one, and would be glad to see other States following the example of Iowa, and forming similar protective unions. The number of bad photographers would be reduced, and the standard of the good raised. Let us hear of their progress.

MOSAICS, 1880.—We have lately, through one of our dealers, received twenty copies of this valuable little book. Those who have heretofore been unable to secure a copy can now do so at any time, as long as the supply lasts. 50 cents.

PHOTOGRAPHERS' ASSOCIATION OF AMERICA.—We have received the following circular, addressed to the photographers of America, dated September 25th, 1880. [JOHN CARBUTT, President; A. HESLER, Treasurer; GAYTON A. DOUGLASS, Secretary.]

"Dear Sir: If not already a part of the new society organized for the promotion of the best interests of the profession of photography, and the elevation to the highest standard of excellence of the products of our art-science, we ask your co-operation in aiding us to put before every one connected with photography such literature as may be from time to time published in the interest of the Association and the fraternity. We ask you to send the Secretary, at once, per postal-card or letter, the names of all the photographers—employers, employees, and amateurs—within your knowledge. By this means, we shall be able to reach every one, and shall endeavor to so engage their attention, that the organization just completed shall grow in numbers, and be found of great benefit to its members, individually, collectively, and to the craft at large throughout the world. Do not neglect this appeal, but, without delay, send the Secretary the information asked.

"The time intervening before our next Convention is not long, and we wish to begin our work immediately. We earnestly hope you will do what you can to aid us. It is expected that the next Convention will be one of the grandest events in the history of photography in America, and we want all to prepare for the occasion.

"Fraternally,

"J. F. RYDER, *Cleveland, Ohio.*

"E. L. WILSON, *Philadelphia, Pa.*

"E. KLAUBER, *Louisville, Ky.*

"Executive Committee.

"GAYTON A. DOUGLASS, *Sec'y,*

"229 and 231 State St., Chicago, Ill."

THE MEGATYPE COMPANY.—In order to correct a misapprehension that was said to exist at the recent Chicago Convention, Mr. J. TRAILL TAYLOR, late editor of the *British Journal*, requests us to state that he is not the individual of a nearly similar name who is, or was, connected with the above-named company.

WE have a letter from Mr. G. GENNERT, dated Dresden, August 8th, in which he says: "I take great pleasure to inform you that I have been here, in Dresden, for a week, ventilating the albumen-paper question, and use my best efforts to induce the manufacturer of the S. & M. paper to make it the best paper which can be pro-

duced. I think I have succeeded in my efforts, and, though it has given almost entire satisfaction heretofore, it will certainly do so to the fullest extent hereafter. The manufacturer will spare no effort to improve the paper as much as it can be done, and warrants that there will be *no more blisters hereafter*, or other complaints."

In our July issue, we gave notice that the August number would be delayed for a few days, to enable us to give the very latest news of the (then) coming Convention. Much to our surprise, as well as gratification, we received numerous inquiries from subscribers who had evidently overlooked our notice. The following are specimens:

"Have not received August number *Philadelphia Photographer*. Cannot afford to lose it."—A. R. COTTRELL. "Where is our journal for this month? It is a welcome visitor, and I miss it very much."—A. W. BALDWIN.

This is from a subscriber in Cuba, written during some detention in the transfer of mail matter: "Please see what is the matter, and have the journals sent, for they are of such value to me, I cannot get along without them."—F. J. ALEIX. "It is rather late to commence taking the *Philadelphia Photographer* for this year, but I must have it or quit the business."—L. R. BLISS. "I think, like everything else in the photographic business, the *Philadelphia Photographer* gets better and better. I am, so my patrons say, getting along fine, steadily improving. I give all the credit to your journal."—JAMES BEACHAM.

BUY IT! READ IT.—The *Philadelphia Photographer* for September and October will have a full report of the proceedings of the Photographers' Association of America, and brimful of other good things for the progressive photographer. Price, for both numbers, \$1. Postage free, by mail. Subscription for four months, balance of year, \$1.50.

ONE of our leading manufacturers writes as follows of the next meeting of the Photographic Association Convention: "Why did they name New York city as the next place of meeting, and who is to be the local secretary? I am afraid they made a mistake."

DURING our visit to Chicago we called on Messrs. ALFRED L. SEWELL & Co., No. 40 State Street, manufacturers of chromatic envelopes. These envelopes are especially neat in their appearance, and particularly adapted to the use of photographers, for whom this firm are also

manufacturing a neat style of packet for transmitting mail-matter, such as pictures, proofs, etc. The chromatic envelope can have the name and business of purchaser stamped on them to order.

MR. SUNDERLAND, whose address before the Chicago Convention appears in its proper place, has been for twenty-four years a practical photographer. His health is now much impaired from injuries received during the late war, and he finds the confinement of the studio too severe. He is, therefore, now travelling part of the time, as his health permits, for Mr. AMES, of Glenn Falls, a practical assayer and gold and silver refiner, well known among leading photographers, and in the Government departments at Washington, for which he does large amounts of work.

The rigid test which Mr. SUNDERLAND proposes for all chemicals used by photographers, is the best of evidence that Mr. AMES' gold and silver, like the man himself, can be relied upon.

MR. W. L. BATES, Denver, Colorado, late of the firm of BATES & NYE, has lately completed his new photographic rooms. A grand opening was given by him to his friends and patrons on August 2d. Mr. BATES has spared neither time nor money in fitting up his new place, and now has the satisfaction of feeling himself proprietor of as neat and elegant a suite of rooms as any reasonable photographer could desire.

He is located on the fourth floor of the building, well removed from the noise and dust of the streets. The rooms are reached by means of an elevator, thus requiring no more exertion on the part of the visitor than in entering a ground-floor establishment. The *Denver Daily News*, *Evening Times*, and *Republican*, all give lengthy notices of the new studio. We hope Mr. BATES' enterprise will be rewarded by a continuous influx of visitors and customers during the coming season.

MR. WALTER C. NORTH, Utica, N. Y., has improved his "apple-blossom negatives" by the introduction of an old moss-covered fence, which is a most valuable addition to the effectiveness of these popular negatives for double printing. The demand for them still continues. See advertisement on another page.

AMONG the many beautiful pictures exhibited at the Chicago Convention none attracted more general attention than Mr. CHARLES WEITFLE's collection of views of Colorado. Mr. WEITFLE has been located in Central City, Colorado, but

one year. He has, however, improved his time to the utmost, as shown by his elegant display. His favorite process is the emulsion, and he is most sanguine as to the future triumph of dry plates over wet, especially in out-door work.

PICTURES RECEIVED.—A cabinet group of the members of the Photographic Association Convention from Mr. J. CARBUTT's gelatino-bromide plate. The group is dispersed on the steps of the Grand Pacific Hotel. The figures are necessarily quite small, still familiar faces are easily recognized. From Mr. WELL G. SINGHI, Binghamton, N. Y., several very fine cabinet portraits with appropriate accessories. Several beautiful stereos from Mr. T. M. V. DOUGHTY, Winsted, Conn., among them, one of an apple-tree in full blossom. Mr. LATOUR, Sedalia, Mo., sends a picture of a little boy, nude, in statuary style. The little fellow did his part well. The lighting is beautiful and general effect very fine. From Mr. VAN LOO, Toledo, O., several fine cabinet portraits of ladies. The bust pictures are extremely soft and effective, the lighting and finishing being very good.

WE are glad to announce the issue of the *Sixth Edition of the Handbook of Photography*, by Dr. PAUL E. LIESEGANG, Dusseldorf, Germany. The present edition numbers 521 pages, and is a marvel for preciseness, practical arrangement, and exhaustiveness. It contains 103 fine wood-cuts, including a number of American skylights. Indeed, American methods, means of working, and photographic practice, are largely interpolated. The talented author begins with the daguerreotype, and carries us practically through the varied useful processes up to date. The large portion of the work devoted to lighting and posing, is particularly valuable. Our only regret is that the work is in German, and cannot be profitable to the bulk of our readers. We can supply copies to order at \$3 each.

DR. VOGEL'S EMULSION.—We are publishing elsewhere some of the reports made in Germany upon Dr. VOGEL's new emulsion, which our readers should give heed to. We have received a bottle of the emulsion, which we shall presently report upon. Meanwhile, a word of praise for some most admirable portraits received from Dr. VOGEL—one of himself—from his emulsion plates. We do not see how anything can be more delicately soft and charming in chemical effect. They excel any portraits we have seen by any emulsion process. One of a child with a dog, whose

mouth is wide open—panting—taken in half a second, is a wonder.

Some street scenes, too, are admirable. The lights are soft and full of color, and no detail whatever is lost in the deepest shadows. *Nothing* can be more delicate or desirable. Soon we hope our friend can arrange to have his emulsion sold in America.

As the time for the fall and holiday trade advances, many are anxious to find some means of suitable advertising. We would call the attention of such to our popular little favorite, the little leaflet *To My Patrons*. We have just filled several orders, and the following is what came back in response: "The leaflets received. Think they are the best advertising medium I have ever employed."—R. F. ELLIOTT. "The *To My Patrons* received this P.M. They are very satisfactory."—WILLIAM FREAR. "I received the leaflets several days ago, and am very well pleased with them. I expect to order more, very soon."—E. KLAUBER. "The leaflets have come to hand, and are in every way satisfactory."—W. W. WASHBURN. "The leaflets received. We are well pleased, and think the money paid for them well expended in the way of advertising. Besides, they answer the numberless questions in regard to dress, time to come, etc."—TULL & HILL.

WE have received from Mr. HIRAM J. THOMPSON, Chicago, Ill., an eighty-page illustrated catalogue of picture-frames, parlor easels, engravings, photographs, etc., offering a full line of most elegant and attractive goods at reasonable prices. Send for a copy before laying in your fall stock.

WE would call attention to the advertisement, on another page, of Messrs. GATCHEL & HYATT, Cincinnati, O. This firm offer, besides the economical retouching-machine and WOLFE's solar enlarging process, various other novelties and conveniences. A good tri-house—to try.

THIS issue completes the report of the Chicago Convention. We would again call attention to our offer of the September and October numbers for \$1.00. They contain a full stenographic account of the proceedings of the Association. There are many who are not our regular readers and who may be desirous of securing these reports; we have, therefore, printed an extra large edition to meet this want. We also offer the last four months of the year at \$1.50. See our advertisement on the cover, page 3.



EDWARD L. WILSON

DIXVILLE NOTCH, N. H.

PHILADELPHIA.

T H E

Philadelphia Photographer.

Vol. XVII.

NOVEMBER, 1880.

No. 203.

Entered according to Act of Congress, in the year 1880,

By EDWARD L. WILSON,

In the office of the Librarian of Congress, at Washington, D. C.

"PICTORIAL EFFECT IN PHOTOGRAPHY." A CHEAP EDITION.

SOME years ago we issued a small edition of a valuable book under this head, by Mr. H. P. Robinson, Tunbridge Wells, England, who probably stands at the head of those in his profession in obtaining pictorial effects in his work.

The book was published in England only, and for this reason our supply was limited, insufficient to meet the demand in this country before it became exhausted. We are glad to be able to announce to our readers that the book is about to be re-issued. After years of waiting, Mr. Robinson has at last consented to revise the work, and we will publish in this country, by arrangement with him, the first revised edition, coming out about the middle of November.

It will be in much cheaper form, and, therefore, quite within the reach of all. The reading matter and valuable cuts will be the same as heretofore, with various *additions* from the author, made in revising.

It is just the book *needed* by the photographer of to-day, who is weaker in the art department than elsewhere. It covers the whole ground of composition and light and shade, together with a chapter on combination printing. Both portrait and landscape photography have their share of attention, and both are illustrated. No one can study

this excellent work without being better able to pose and compose his subjects and to light them more artistically. The faculty artistic, Mr. Robinson maintains, does not come by nature, as many say, but that it is a cultivated sense. Therefore, there is encouragement for every one to study and practise the rules which guide to more perfect results. Those who are comparatively unskilled hardly realize how much there is to learn that is of value to them. This book will open their eyes, and enlighten them, if they can but see when their eyes are open. We have learned much from its perusal, and shall often have to refer to it and extract from its pages. It is *useful*, and we recommend it. Would that we were able to place it gratuitously into the hands of every one of our subscribers.

Aim high, and try to *excel* in all you undertake.

The most pleasing and successful work always comes from those who exercise the greatest amount of artistic feeling in the treatment of their subject, be it a portrait or a landscape.

The book contains 162 pages, divided into 31 chapters, of matter of intense interest to you all. The great good about it, in addition to the rest, is that we are enabled to sell it at \$1 in paper, and \$1.50 in cloth, instead of \$3.50, the old price. See advertisement and notices of the press.

OUR PICTURE.

DURING our summer vacation—July last—we employed considerable time with our camera. It was our companion during many a delightful clamber, and more than once, when it was a question as to who should get hurt, or which of us should go sprawling down some deceptive land-slide, the camera ever came out safe and unharmed. Of course this was the case, for it was our associate—*our love*—for the time being, and by cunning cajolery and winsome whisperings, we were enabled to draw from it some exquisite enjoyment. It compelled us to many a wild climb which would not otherwise have been taken, and gathered beauties for us which have given pleasure ever since. This pleasure is plenteous enough to divide with our patrons, and, therefore, we give this month to each one of them a print from one of the negatives we made during the happy month named, spent in Dixville Notch, New Hampshire.

Our outfit consisted of a 5 x 8 *American Optical Co.'s* "Philadelphia" Camera-Box, with six double dry-plate holders in a neat case; a light tripod; a Morrison View Lens, six-inch focus, and a No. "C" Morrison "New Rapid Copying Lens" for groups.

Our stock consisted of *Newton's Emulsion* (packed in tin cases of six each) and *Carbutt's Bromo-Gelatin* plates, all 5 x 8 size. Our habit was to fill the six holders, which were numbered on each side, so there could be no such blunder as double-exposure, and start out upon the march for victims and victory. The scene of combat was a charming one. No happy photographer ever found a sweeter place to test his skill, and compel his choice of an infinite variety, than the three miles radius which covered the scene of our loving fights and gentle make-ups with the "bits" presented to us. No matter how difficult the capture, we generally made the attack upon what we fancied, with an "*it can be*," and came off from the field exultantly with an "*it is*."

The scenery about brought happy days in Switzerland constantly to mind. There are many sweet places in our land whose lovers like to call "The Switzerland of America," and justly, too. But of all we have seen,

nothing compares so favorably with Switzerland as the scenery about our favorite Notch at Dixville. We claim for it, then, the right to be called, over and above any other place, *The Alps of Appalachia*. Why? Because, as an old Alpine scrambler, and long a climber amid the "White Hills," and many another region, we know that, east of the Rocky Mountains, there are no such picturesque peaks, splendid spires, rocky buttresses, and profiled ridges, as there are here. True, perpetual snow does not cover all the spires—inclines; true, there is but a radius of three or four miles for which we ask this *nom de plume*, but in that small section there are crowded together—*concentrated*—all the elements of an Alpine section which thrill the lover of the romantic and the picturesque, and which can be enjoyed—the climbing of the loftiest peaks and all—with comparatively little labor, and by the unpractised scrambler, too.

There is perpetual snow here, and a half hour of careful clambering places your hands and feet upon it. There are lofty outlooks and distant pastorals; chattering cascades and rifted ravines; rocky glaciers which tempt you to their rugged angles, and put you on your mettle to reach the great perpendicular rock-masses, from which they exact tribute each spring-time, with the pry and wedge of the ice king, impelled by the steam-hammer of the sun. There are shady bridle-paths to the various summits over the soft moss, where the ferns nod a gentle salute and welcome, and the raspberries distract you, and refresh and rest you. But over all, and above all, in attractiveness, are the glorious peaks, which startle you by their naked forms, and whose outlines change each rod of the way so widely as to make you doubt their identity. As you travel through the "Notch" proper, a continuous metamorphosis takes place—a charming change—presenting a veritable Vatican of natural pictures.

One moment the Matterhorn is before you in miniature. It is the Gloriette which lifts its head bare for hundreds of feet from the foliage, until, as at the Matterhorn, so here, you may see the ascending climber from base to summit! At its rocky-top one can stand upon the narrow ridge, or sit astride it, and

complete the delusion. At the left is a pastoral scene equal to the passage of the Grimsel in beauty. The comfortable Dix House is in its centre.

Overlooking the face down the precipitous incline, almost perpendicularly, you may see and jodel with the passing traveller. Across the "Notch" you observe the long, rugged line of profiles dubbed the "Sanguinari"—a bloody-looking place indeed. The profiles here of Brutus, Cassius, Antonius, of the "Old Nun," the "Beer-taster," and as many more as your imagination will suffer you to create, without much stretch of it, too, are all fine bits, chiselled by the ready hand of some great Michael Angelo of the elements. To the right-oblique are the twisting sides of the "Notch" proper, with the cliffs peering through, every few rods. To the sharp right, and the "Old King"—yea, "*king*"—for the hardest of all to master—stands forth, his impregnable sides defying the most intrepid climber. But he, too, like "all humanity, has his price," and if you know how, you may, after two hours of hard work, plant your feet upon his frontlet, and place a signal upon his crown.

Away beyond the hotel, and at its rear, peer out from the trees three naked faces of Palmageni, which are more deceptive than Janus. These, too, are approachable when you have earned the right to victory. From them, far in the distance, you see the Androscoggin Valley, Umbagog Lake, and the Magalloway Mountains; or, turn you sharply about, and Colebrook Valley, the Connecticut, the Mohawk, and Mount Monadnock repay you for your climb.

But the gem of the gems is the *downward* look from the Gloriette. The spires and the pinnacles bristle up at your feet like a legion of bayonets, or like what one sees looking down from the highest pinnacle of Milan Cathedral upon the glistening roof. The old sculptured forms loom up, now singly, now in fantastic groups, making one think of the wild compositions of the *Odyssey*. Indeed, we ventured to name one of these latter "Circé and the Companions of Ulysses"—the Circé, a harsh, heartless, cruel needle, uplifted diagonally, with begging, bristling, masses of noses upturned at her feet.

Oh, beloved camera! how helpless thou

art to gather these treasures. Oh, busy, willing stylo! How impotent to describe them! How like this Homeric picture it all is:

"She handed them

The beverage, and they drank. Then instantly
She touched them with a wand, and shut them
up

In sties, transformed to swine in head and voice,
Bristles and shape, though still the human mind
Remained to them. Thus sorrowing, they were
driven

Into their cells, where Circe flung to them

Acorns of oak and ilex, and the fruit

Of cornel, such as nourish wallowing swine."

And here, in numbers, do their

"Fellows sprawl."

It is all lovely and fine, and withal there
is—

"A crystal clearness in the air

Which makes the landscape doubly fair,"

and "makes" of you at once a kitten and a gladiator. *Come!*

Should you want to see it, take the Sound boats, at 5 P.M., from New York to Fall River or Providence. You arrive about 6 A.M. at either place. A parlor-car awaits you, which will carry you *via* that great White Mountain highway—the Boston, Concord, and Montreal Railway—to Littleton. There change, and at 7 P.M. you arrive at North Stratford. Here stages await to carry you through the delectable region to the celestial-like "Notch." There the veteran proprietor of the "Notch," and of the Dix House, Mr. George Parsons (post-office address, Colebrook, N. H.), will ensure you comfort and good living.

We shall never forget our last look at Dixville Notch. We sat upon the piazza of the Dix House, stylographic pen in hand. We looked up, and, as twenty times before, since we began these notes, so now we saw the great cloud-balloons lift their airy heads above and behind the spires, just long enough for us to salute them. They are joining hands. Even now the storm is coming up the notch, steadily, like an army. The notch is assaulted, filled with the forces. Victory seems imminent, for everything is shut in, and under the cloud. It will not last, for on hurries

the contesting sun's rays! The vandals are vanquished, evaporated to a filmy figment—and glory! the bow of victory and promise is planted across the notch, from the “Gloriette” to the “Sanguinari.” The “Old King” is huzzahing underneath God's archway at the result of the battle! It is all glorious.

But the pictures will tell all. We have printed from five subjects. We will briefly describe them, in order that our readers may distinguish them.

The first is of the gates of Dixville Notch from the hotel piazza, second floor. The grove of pines in the foreground is near to the piazza. The highest point on the right is the “Gloriette;” the second is the “Old King,” whose rounded forehead, snubbed nose, and parting lips can be fairly seen. Between these rugged peaks which form this view, for the distance of near a mile, are what look like sleepy mounds. Upon the rugged sides thereof are to be found the choicest bits for the camera. Of these, the second view is one of our best. It is the representative view of the notch. The rock “Circé” is here shown, with many of the ugly “companions of Ulysses” about her, with some young people poised near by to balance the lines and complete the composition.

Before we come down to this, though, the third view should be described, for it is the tip-top summit of the “Gloriette,” known as “Table Rock.” Here we have posed our four young friends, who were picnicing and snowballing on July 26th. The wind always blows there, and we had to disregard it. The narrow “Table,” like a street in Venice, is not too wide to stride across. The view from this point we have tried to describe. A huge “liberty pole” leads our thoughts upwards.

A splendid idea of the nature of the rock formations (mica-slate) can be had from the next view, which is of the *side* of “Table Rock” from a point near by. It can easily be seen how Nature, charging with her elements upon these rugged fronts, must each year change their outlines.

The last subject is a part of the “Sanguinari,” which is the rough ridge described, and which lies at the left of the notch shown

in the first view. Here we see Antonius and his fellow-disputants in profile, and a great rock at their feet, which has been dubbed the fallen, dead Julius Cæsar.

Thus we have shared with you the food of our camera, and infringed largely upon your space to tell you about it. We gathered much interesting experience there and then, which we hope to make of value to you in a series of papers begun on another page, this month, on “Out-door Work Made Easy for Everybody.”

No one resisted the adoption of dry plates more obdurately than we. Our results this summer have convinced us of their value, and we say what we do freely, and after experience had. Our success is all due to the plates used and to our unequalled apparatus. Our prints were made at our own establishment, upon Mr. Gennert's importation of Dresden paper. The clouds, of course, are natural, but printed in.

CHEAP AND VALUABLE SIPHON.

BY W. D. CHANDLER.

ENCLOSED you will find photographs of a siphon of my own invention, which, for cheapness and simplicity, surpasses anything I have seen published. I have used it about four months in my gallery, and find it works so perfectly that I have concluded to give it to the photographers through your valuable journal, and if it is of benefit to any one I shall feel well repaid for making the description.

Buy of any druggist a rubber bulb with an opening at each end, about four feet of rubber tubing, and a glass tube such as used in babies' nursing-bottles. Have the hole in the bulb and tubing as near the same size as possible, and the glass should be large enough to fit into the rubber snugly, to prevent any air from getting in. Use two pieces of the glass, each about one and a half inches in length,



and press each piece about half of its length into each end of the bulb; cut the rubber

tubing in two at the centre, and press the end of each piece on the glass tubing, and



the siphon is complete. It requires no cement to hold it together, and when one part becomes worn or injured a new one can be substituted without buying all new. These different parts will cost but from seventy-five cents to one dollar, and this siphon is worth more than one from a dealer which costs two or three times that amount, because there are no cemented parts to give out. When not in use it can be rolled up, put in a small box, and it is out of the way. It is used the same as any bulb siphon, by holding tightly the lower end of it while forcing the air out of the end in the solution to be drawn by pressing together the bulb. It will draw off a bath from the holder perfectly clean. After a photographer has used this, I am positive he would not be without it for ten times its cost, as not a single drop of the bath is lost.

ST. ALBANS, VT.

A PLAITED FILTER.

BY ALEXANDER SPIER.

In your very useful book, *Mosaics*, for 1880, on page 112, I found a remark about describing a "plaited filter," by Mr. M'Intire, M. E., in his interesting "Chemical Manipulations." Inclosed you will please find description and diagram to illustrate the subject. I will be rewarded if you can find it worth the space in any of your publications.

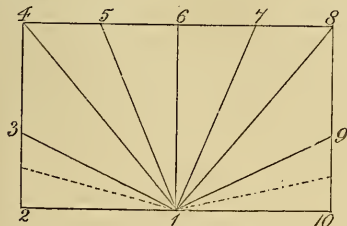


Fig. 1.

Take a rectangular piece of paper and fold it like a sheet of paper, that is, to bring two

corners together, then (Fig. 1) fold 10 upon 2, and now always open the last fold after folding; then 10 upon 6, then 1—10 upon 1—8, then 2 upon 8, then 2 upon 6, 2 upon 4, and 10 upon 4. This will produce seven folds, all on one side of the paper. Make, now, folds between each of these, so as to raise

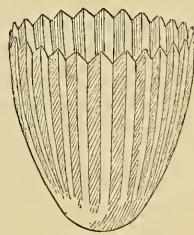


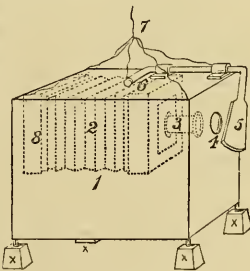
Fig. 2.

ribs on the opposite side of the paper. Cut off the projecting corners, to give the whole a circular shape; open it, and form it into a cup (Fig. 2).

VICKSBURG, MISS.

PHOTOGRAPHING UNDER WATER.

I HAVE been using my leisure time for the past four or five years, trying the experiment of photographing under water, and have met with better success than I expected. Most every one with whom I have talked, has advanced the theory that it was too dark under water for the chemicals to work, but many will be surprised at the transparency of clear water. It has been proved that the light will act upon chloride of silver at the depth of 150 to 200 feet, and I will leave it for you to judge how much quicker it will work on iodide and bromide of silver. I have invented a number of machines (for my own use) for photographing under water; the latest I will give a description of. No. 1, is a tin or sheet-iron box, 14 inches long, 12 inches high, 5 inches wide; open at the bottom, to give the water a chance to compress the air and prevent the box bursting in deep water, and



gives a chance to remove the inside box or plate-holder, No. 2, with lens at No. 3, plate-glass over the opening, No. 4, water and

air-tight. No 5, is a trap or cover for the lens, and drops of its own weight on the machine touching bottom, the line No. 7 being slack, and is closed on drawing up the line; No. 7 pulls up the lever No. 6 and closes trap No 5; the plate is at No. 8; heavy weights are fastened at x x x x, so as to keep the machine right side up. Most of my experiments have been carried on in ponds and such places as were convenient, and have worked quick and well so far. And I have no doubt, if some one had money and time to experiment in deep water, they would make a success of it there.

It could be used for finding torpedoes by vessels of war, finding wrecks, photographing the sea gardens and bottom of the sea in general. I am in hopes yet to see photographs and views of the bottom of the sea a common occurrence.

GEO. C. MOORE.

STURERIDGE, MASS.

A FEW SEASONABLE SUGGESTIONS.

BY H. A. WEBB.

As we are drawing near to that season of the year when we not only expect, but experience a decided lowering of the temperature, it is well for us to take into consideration the fact, that our chemicals are quite as sensitive to these changes as we are ourselves. Some may say, "we know that, and guard against it, and keep our dark-rooms warm, and, consequently, our chemicals are not affected." To such I would say, you do well.

There has been so much said, so many plans suggested for keeping the chemicals in the dark-room warm, that I would not attempt to add to them. But the requirements of the printing-room in this respect, in many establishments, are completely ignored. I could mention some of the largest galleries in the country where such is the case. But to the point. My object is to give some plans that I have practised, and found useful in keeping the chemicals at the proper temperature for working.

First, the silver bath. It is well to leave it in a room where there is fire over night; but even then, during the night, the fire

is very low, and in quite cold weather the room becomes chilled before morning. In that case, the first thing I do is to put a kettle or other vessel of water on the fire or over a gas-stove, and while changing my clothes, filtering the silver, and getting ready for work, the water will become quite hot. I pour this into the silvering-dish, and allow the dish to get hot, and when this is replaced by the silver bath it will raise the temperature to about what is needed, and will remain so long enough to silver what paper is required for a day's work in an ordinary gallery. Where it is required to silver paper for half a day or more, as in some galleries where I have worked, a very good plan I have found is to have a pan large enough for the silvering-dish to sit in, and a couple of pieces across the pan about one and a half or two inches from the bottom, for the silvering-dish to rest upon, and this filled with warm water, which can be kept at the proper temperature, say, about sixty degrees, with a small gas or coal-oil stove. By this means you have the temperature of your silver solution under complete control all day, if necessary.

In acidifying the prints, a little warm water facilitates the reddening of them very wonderfully. The plan I have adopted for keeping the toning bath warm is similar to that for the silver bath; the same pan will answer for both. Unless there is a very large number of prints, it will only be necessary to fill the pan with warm water; but if necessary, the gas or coal-oil stove can be used for this also. In this case, care must be taken to prevent the bath from becoming too warm, as the action will not only be uneven, but also flat and gray, with a tendency to measles.

The fixing-bath may be made up of warm water, and all the operations are through, with far more satisfactory results; and, as regards comfort, I will leave it for those who have tried this and the ice-cold solution to judge.

THE *Art Journal* says: "Mr. Robinson's *Pictorial Effect* is full of sound instruction upon a subject which comparatively few photographers appear to understand."

AN ESSAY ON THE EDUCATION OF THE EYE

WITH REFERENCE TO PAINTING.

BY JOHN BURNET, F.R.S.

(Continued from page 309.)

STUDYING FROM NATURE.

OBJECTS drawn from nature possess a very characteristic difference from those drawn from the combinations of fancy, or from those images presented to the imagination. We find in sketches from nature many minute circumstances, a truth and precision, a variety and beauty, that objects drawn from memory, or those images under the guidance of the mind only, have no pretension to; the latter possess the general appearance merely like the confused character of nature presented to indistinct vision; or, if made out with detail, the minutiae contain a select set of touches or forms, become agreeable from habit, which constitutes mannerism; such imperfections can be avoided only by having accustomed the eye in the first instance to a scrupulous exactness in delineating objects from nature, as one or two parts left out may destroy the richness and variety of lines, and an unequal proportion of the forms may deprive the copy of the truth and beauty of the original. These peculiarities are also to be examined and contemplated upon, that this character may be engrafted upon works of imagination. Reynolds says, "I very much doubt whether a habit of drawing correctly what we see, will not give a proportionable power of drawing what we imagine."

To educate the eye to accomplish this, it is necessary, in the first instance, to select such objects as are simple in their forms, that the eye may perceive them distinctly, and make them gradually give place to others more complicated, to fit the eye and the hand to a variety of lines. It is also of the first importance that the drawings be made sufficiently large, that an opportunity may be given for filling up the various spaces with the minute parts, and also to prevent the hand acquiring a cramped, or little manner of drawing: it is also of equal importance that the object chosen for representation be such as can be compared with the

original, to test the exactness of the copy: much injury and fallacy has arisen from not attending early to a proper mode of study; how often, for example, do we perceive in those who draw landscapes, the incapability of drawing the human figure with any degree of correctness; this arises entirely from careless drawing in the first instance. A tree may be imperfectly drawn, yet look sufficiently true to please most spectators; but the human figure possesses proportions, the want of which can be easily detected; but had we an opportunity of comparing the tree with the original in nature, we should discover the resemblance to be equally imperfect; for an eye capable of drawing correctly, can draw any object presented to it, whether simple or complicated. Educating the eye, in the first instance, in the elements of lineal and aerial perspective, gives it a clearer insight into the causes of the changes of form and shadow observable in all objects; while drawing from the objects themselves in place of copies, gives it a power of perception,* and a knowledge of embodying forms in composition, quite unattainable by any other method. When we consider that the images of objects dwell upon the retina only while the eye is directed to them, and, like the pictures on the table of the camera-obscura, instantaneously vanish when we turn to something else, we may perceive the necessity of keeping each several part sufficiently long under examination be-

* Dr. Jurin observes, that the eye, as well as other parts of the frame, acquires strength and perfection from frequent use of the muscles, as is noticed in the eyes of sportsmen, travellers, sailors, etc., who see better at long distances; while those whose professions lead them to close examination, see better at small distances: but drawing from nature, especially distant prospects, perfects the eye in both these extremes, as we have to carry the vision to examine objects far off, and immediately transfer it to a near examination on the paper close to the eye, for this organ is wonderfully provided with the means of changing the crystalline lens, both for pushing it forward from the retina, and rendering it more convex when viewing near objects; and also for drawing it more within the vitreous humor and rendering it flatter when examining distant objects.—See *Dr. Jurin on Distinct Vision* and *Potterfield on the Eye*.

fore delineating it, that the mind may be put in possession of its form and color, so as to retain it in the memory not only while copying it, but with such an impression as will improve and enrich the imagination with a multiplicity of imagery. Those who advocate the study of nature, without educating the eye in the first instance, are not aware that it is the superficies of things only which present themselves to the outward vision, and without a monitor to direct, the art would always be in its infancy.* A tree drawn by a beginner represents a flat image, like a plant or a piece of sea-weed dried between the leaves of a book; a figure represents but the section of one, for even if the foreshortened portions were perceived, he is incapable of giving them the perspective appearance, or lifting it from the ground by means of the application of light and shade. The first restorers of the art in Italy advanced but little beyond the flat brasses that supplied them with the means of design: even in the hands of Giotto and Massaccio foreshortening was but little attended to, and then, from a want of light and shade to give the parts their relative situations, looked cramped and feeble; it was not till the master minds of Leonardo da Vinci and Michael Angelo grappled with the subject that difficulties disappeared; those portions of the figure were no longer represented in profile views, but advanced or receded from the spectator, and whole groups, in place of looking like a continuous frieze, were turned round, and sunk in the depths of the composition by means of lineal and aerial perspective. Raffaele, by taking advantage of the works of those who had preceded him,

* Cicero remarks, that not to know what has been transacted in former times, is to continue always a child. If no use is made of the labors of past ages, the world must remain always in the infancy of knowledge. The discoveries of every man must terminate in his own advantage, and the studies of every age be employed on questions which the past generation had discussed and determined. We may with as little reproach borrow science as manufactures from our ancestors; and it is as rational to live in caves till our own hands have erected a palace, as to reject all knowledge of architecture, which our understandings will not supply."—*Dr. Johnson.*

carried the art to a state of perfection, which the study of Nature, notwithstanding his constant application to her, never could have enabled him to achieve; the contemplation of the fine works of antiquity created elevated visions of ideal composition, while his constant application to nature for the details enabled him to give a reality and identity to the creations of his imagination. Without the eye being made acquainted with the beauties of those who have advanced the art to its present state, either progressively, by studying the best works, or by commencing a course of drawing from antique sculpture, it will be impossible to select what is beautiful in nature, or be able to choose one point of view more interesting than another. It will also be impossible to combine a variety of objects, unless we have a knowledge of those principles upon which the various works are constructed that have given satisfaction; for though, as in the case with music, the varieties are endless, yet the science is simple, and to be perceived by those who investigate the arrangements of harmony. He who attempts to study from nature unassisted by education, in the first instance, will find himself often mistaken in his results; neither will he arrive at so certain or so expeditious a method of delineating objects with truth and feeling, as he will be continually in dread of falling into error. Leonardo da Vinci says, "theory is the great director of experiment, the only interpreter of the works of nature which is never wrong; it is our judgment which is sometimes deceived, because we are expecting results which experiment refuses to give; we must consult experiment, and vary the circumstances till we have deduced general rules, for it alone can furnish us with them; and general rules direct us in our inquiries into nature and the operations of art; they keep us from deceiving ourselves and others, by promising ourselves results which we can never obtain."

This is the experience which enables the artist to select and combine, to leave out or add to the various appearances presented to his eye. Why is it, for example, that the portrait painter, when his sitter is placed before him, turns the head, first to one side, then to the other, and contemplates it also

under a variety of effects of light and shade? It is to observe the best arrangement of the features, to select that view of the head which develops the greatest character and the most beautiful points. To enable the eye to make these selections, it is necessary to combine with the study of the works of those eminent men who have preceded us. The works of Titian will convince the student how much quiet grandeur is to be produced by simplicity and breadth; the works of Vandyke exemplify the art of arrangement, and a beautiful distribution of the features, also the art of uniting the several parts by means of light and shade, or disposition of the hair, or subordinate accessories. This power of planning out or adjusting the several parts to the best advantage may be acquired by long contemplation of the various combinations observed in nature; but a reference to the etchings by Vandyke, and the prints after him, will facilitate the student in his inquiries. We know that Rubens advised Vandyke and Velasquez to study the works of Titian as the best means of arriving at perfection in portrait painting; and so uniform has been this mode of acquiring correct knowledge, that the works of Reynolds or of Lawrence may be studied as the best means of shortening labor, these artists having adopted the principles existing in the works of their great predecessors, so as to suit the fashion and taste of their own times, but along with such study bringing their own genius to the incessant contemplation of nature: for, as Bacon observes, "to spend too much time in studies is sloth; to use them too much for ornament is affectation; to make judgment wholly by their rules is the humor of a scholar, they perfect nature, and are perfected by experience; for natural abilities are like natural plants, that need pruning by study, and studies themselves do give forth directions too much at large, except they be bounded in by experience."

(To be concluded in our next.)

THE PHOTOGRAPHIC MOSAICS FOR 1881 will excel all its predecessors. Some grand papers are already received for it. Room for a few more only.

ABOUT THE P. A. OF A.



AN AFTER ADIEU.

YES, "let us begin to scrape" now. Already I see an improvement of at least ten per cent. in my work. And if I had not improved *any*, the very fact of my trip for the purpose would pay my expenses in the increased patronage.

Yours truly, J. O. BAGWELL.

HELENA, ARK.

MR. G. A. DOUGLASS, the talented Secretary of the Photographers' Association of America, evidently "means business," and we shall expect great results from his efforts. We are sure photographers are largely interested, now, in the welfare of the Photographers' Association of America, and that they will flock around the standard, and help bring about a grand gathering in 1881.

WE are glad to see the place of meeting being further discussed. The Executive Committee are in a real perplexity now. If those who voted to meet in such an expensive place as New York city will come up promptly with funds to pay the expenses, doubtless New York will be the place. The Committee will reluctantly change from what they believe to be the real desire of the Association, but they will be still more reluctant to arrange for large expenses, unless the money is in the treasury. What will those who favor New York do about it?

A NUMBER have already written us protests against meeting in New York.

A DELIGHTED ATTENDANT.

I AM pleased with the *entire completeness* of your report of the Photographers' Association of America Convention at Chicago. As I read it, I felt as though I was really

there, sitting and hearing the same as it occurred (excepting I didn't feel any "sea-sickness" on the "Flora" then or now).

By the way, somebody has made guess-work with my name, even from the beginning. It was first G. Clifford, then D. H., and now, in your report of vice-presidents, in "Specialties," I am set down as belonging to the State of Maine. Will you be so kind as to correct it so I will stand credited to *Ver-mont*.

I am happy to say that the really good things we had at Chicago were a hundred times more than compensating for the expense and trouble, and I hope there will be an increasing interest in and a permanency of the Photographers' Association of America. Very truly yours,

D. A. CLIFFORD.

ST. JOHNSBURY, VT., Sept. 25th, 1880.

IS EVERY ONE NATURALLY AWKWARD?

BROTHER VAN LOO made some assertions, while at Chicago, which I would like to have him *prove*, for I cannot agree with him, and if I am in the wrong, why—"well, I'm willing to be forgiven."

He said: "Every one is naturally awkward." "No person will get into a graceful position unless they have learned to do it." "We have nothing to do with a person's feelings, we do not take their feelings."

I would like to have him express himself farther on these subjects, and also hear from others, for I believe we all need to think more deeply, and inform ourselves in reference to everything which may assist us in our beautiful art.

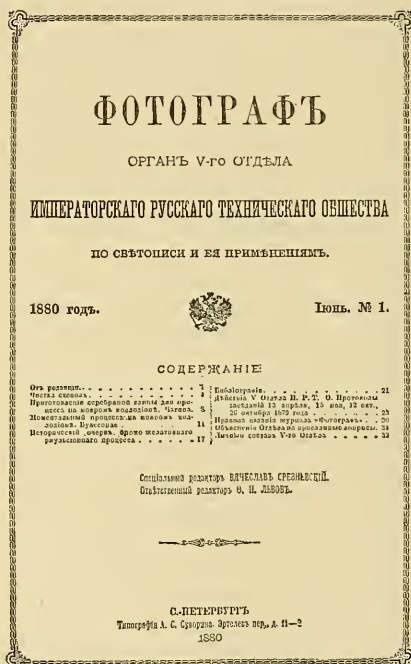
MRS. E. N. LOCKWOOD.

WE understand that the Executive Committee will investigate the matter of expenses, and shortly report to the craft. We are assured they want to do the best thing for the growth and welfare of our art and its votaries.

A RUSSIAN PHOTOGRAPHIC MAGAZINE.

WE have received the first three issues of a new contemporary, which we gladly welcome, from St. Petersburg, Russia. It is about the size of the *Philadelphia Photogra-*

pher, admirably printed, and put out in good shape. Alas! although we are afflicted occasionally with an attack of catarrh, our present condition is not sufficiently spasmodic or sneezeoric to read this new magazine. The best we can do is to present a photo-engraving of the *cover* of our good contemporary to our readers, frankly say—we *don't know*, and appeal to their mercy.



We think we have got the cut in right side up. If any of our readers can translate it for us—let them sneeze away. Any way, we wish the new magazine great success. Russia has carried our art to a high degree of perfection, but she wants the—new magazine. It is a good one, evidently.

A SIDE SUGGESTION.

BY J. F. RYDER.

WITH a view to the comfort, as well as general interest, of the next meeting, I would like to talk a little. We took so fine a start at Chicago that I think we may safely count upon the biggest turn-out next year ever known as a photographic gathering.

As a rule, we are a "stay-at-home," no-

vacation people. Many of us pay our doctors more money, and lose more time from sickness each year, than would pay for a month's recreation, that would put vigor and ambition in us beyond the power of pills—and pleasanter to take withal.

Our meetings should have attractions of pleasure as well as of profit. I would suggest that all who possibly can do so, arrange for a stay of a few days beyond the time of active convention work, and after we have sweltered in the heated city, in hot August, for three or four days, we proceed to a desirable spot near the city, by the sea-side, where we can take in a full breath of salt air; go in our shirt-sleeves; go barefooted in the sand, and treat our bodies to a wash in old ocean. There, with healthful recreation, we can carry out in practice the pleasures of camera work. We can eat clams of our own digging, and romp like boys out of school.

A little timely preparation for an "outing," as above suggested, will make the thing possible and easy. We could have a temporary shanty put up, with an opening for a light; could be easily provided with all necessary facilities for work; where posing and lighting could be practised, and where learners could have the benefit of seeing how it is done by the older ones; or the older ones be taught by the progressive younger ones. The ambitious seeker for variety may take his camera practice in capturing the upthrown waves, passing vessels, groups of bathers, and bits of interesting nature within reach. Those seeking rest and recuperation will be permitted to roll about in the sand and under the shade. Pleasure and profit can surely be found by all in some of the many directions open. We can contract with parties to furnish us tents for shelter, and feed us at our own tables in good style, and at a moderate figure.

If you think well of this, please put it before your readers, and let them be turning it over in their minds. Something may come of it.

OUR NEXT EXHIBITION.

BY GAYTON A. DOUGLASS.

REGARDING the exhibition of the products of photography to be spread at our Convention next August, a few suggestions thus early may be timely and beneficial. It is the expression of a large number that the examples of work shown are intended only for the benefit of the fraternity, solely for study; and that the large expense of framing and decorating, attended with a considerable outlay for transportation, boxing, and a great amount of valuable time consumed in hanging the pictures, saying nothing about the damage that often occurs in carriage to and fro, can be wholly avoided, and the purposes of the exhibition better served by bringing the various contributions in portfolios.

This idea was first suggested to me by Mr. John A. Scholten, of St. Louis, and the plan grows in favor the more it is considered. A member of the Association desires to display his work at our yearly meetings; instead of waiting until the near approach of Convention time, and then making a grand effort for the occasion, which often leaves him with exhibition work greatly inferior to what his daily practice of the preceding months has brought his patrons, he starts from the day he returns to his studio, and from every fine production he takes a print and puts it away in his portfolio, mounted or unmounted, as the choice may be, until the week or two preceding the time for his journey, when they can be looked over, re-selected, mounted, if required, and the labor is done. Not only the best efforts of his genius, as they come to him during the year, but often failures, that have great interest and use as educators, can be brought along. All these can be placed on proper sizes of mounts, and easily and quickly placed in position on screens provided for the purpose at the point of exhibition, with the aid of what are called artists' tacks, which hold the mounts firmly in position on the screen, without mutilating the picture. In this manner can be exhibited a very large number of pictures, and with best effect for study. When the Convention closes, each exhibitor can, in a few moments, secure his contribution, and replace them in his portfolio, and return with

GET Robinson's *Pictorial Effect in Photography*, and learn how to improve the art-quality of your work.

them without expense to himself, the Association, or any danger of loss or damage. Another feature of this plan which commends itself for trial, is where a number join in an excursion to the place of meeting. Their journey is made profitable and pleasant by the exchanging of their portfolios, and studying each other's work; they have gained so much while on their way.

I throw out this suggestion at this time, inviting criticism as to the merit of the plan, and hope to hear from members of the Association, and others, what may be thought of the method. I think it worth a trial, and hope a large number will act at once, and provide portfolios to receive daily or weekly contributions to bring with them when the hour has arrived. The expense is trifling, and as your collection grows you will find it a source of pleasure and profit from time to time to study your best efforts, and, possibly, such failures as you may have thought best to contribute.

The aim and purpose of the Association is, in the main, educational, and every feature that tends to promote this end should have earnest attention. The labor of bringing about this effect must not be left until the last moment, but distributed through the months, so that when the time comes we may be all ready, and meet prepared for the great work of the Convention. The officers chosen will do their work zealously and faithfully, but they must have the constant support of every member to carry out successfully the great work the Association is expected to do.

PHOTOGRAPHIC BOOK-KEEPING.

PHOTOGRAPHY is eminently an artistic profession, and should be followed with constant cultivation of the æsthetical side; but still it has a practical side, which cannot be neglected by those of us who follow it six days of each week for the livelihood which must come therefrom. By close attention to the details of the *business part* of the work, money, moments, mistakes, and mortification will be saved, and the artist's reputation greatly enhanced, and the confidence of the public secured; and this is the

tide which, taken at the right time, will bear a man on to prosperity. Accuracy and despatch in attending to the details of business, can only be accomplished by system and constant diligence; the lack of either will ruin the best business. The system must be the simplest possible, consistent with the faithful observance of all the important items, and in accordance with the plainest common sense.

Artists and musicians are proverbially unbusinesslike, and many a man has had his fortune slip through his fingers while laboring hard and successfully with camera or pencil, because his system, or lack of system, in book-keeping, made debit and credit indefinite terms, and his fine negatives of former years could not be found when his patrons were anxious for duplicates. Proper book-keeping, or better *book-using*, can be reduced to such simplicity that a primary-school boy can successfully conduct it; and yet there are many who could not tell from their books how much cash they had on hand, or how much was due them, and who must ask their creditors, individually, how much they owed to each. I would not advise any one in our profession to spend time or money in so-called commercial colleges, unless both time and money were plenty, but insist on a complete knowledge of debit and credit in all their relations.

The necessary books to be *used*, not kept, are, a day-book, cash-book, ledger, order-book, also a large index for registering negatives, if required. These need not be expensive, but should be large enough to hold one or more years' business without scrimping, and cheap enough, so that space will not be saved for the sake of economy. What is called cap size, broad fold, is most convenient; the size of the page is $13\frac{1}{2} \times 8\frac{1}{2}$, and may be bound in "board sides and leather back and corners," this, covered with canvas, will look as well and last as long as though it was bound in full Russia or morocco, and so covered. The day-book and cash-book should lay on a high desk within reach of the person dealing with customers (but not to be overlooked by them); this will be more likely to insure that *each item* is put in its proper place, for *on this depends the accuracy* of single-entry book-keeping, and

anything but vexation in double-entry. Single-entry of the simplest kind is sufficient, if the person in charge will only use his books *every time* value is exchanged.

The day-book is really a history of the transactions wherein cash is not an item, and can be the ordinary account-book with two money columns on each page, one for items and the other for totals; and everything that goes out of, or comes into possession of, the proprietor, should be entered at once, no matter if a counter-charge is to be made in an hour.

I may say something about opening and closing entries in connection with the ledger. The cash-book is simply a day-book in which only cash items appear, and may be a similar book to the above; only, for convenience, the cash debtor items (cash received) are put on the left hand page, and the cash credit (cash paid out) on the right hand page; the left hand money column being used for the items on each page, and the other for footings. Write out each transaction so that any stranger could understand all your business were he called to settle your affairs on account of your having taken cyanide, or being otherwise called away.

The ledger is simply for an abbreviated assembling of the items belonging to each individual with whom you have dealings; this, in pure single-entry, is all that can be put there; but the necessity of seeing at a glance the transactions in merchandise, expense, bills payable, and bills receivable, etc., so-called imaginary accounts, has led to their being personified and introduced in the ledger until, where they are larger and complicated, a system of entries and proofs, called double entry, is necessary; but our business rarely calls for that, the more common accounts of that kind can be used with comparative ease, particularly if you *pay as you go*, which is always the best way. If, on commencing, your stock in trade consists of cash only, but one entry need be made on the day-book, and posted to your credit on the ledger, and to the debit side of cash on the cash-book; if your stock consists of merchandise, apparatus, etc., then they must all be put to your credit, and the debit side of their accounts on the ledger, by a proper entry on the day-book. You have then

committed your business to the books to be kept; see that it is done, and returned to you with profit at the end of the year.

And here is a good time to speak of a cash-book, which I like better than the other, because it saves posting to the ledger the items of cash transactions, by posting the totals at the bottom of each page. A book similar to the ordinary day- or cash-book, only that there are five double columns on each page for money, instead of two. These columns are headed respectively, on the debtor side, "Mdse., Manuf., Accts., Sundries, Totals;" on the credit side, "Mdse., Stock for Manuf., Accts., Expense, Totals." If I had a larger book I should like more columns, such as sundries, apparatus, and furniture, on the credit side; for help, personal accounts should be kept with each person, and carried to expense in the end. By posting the totals at the foot of each column, except such as "Accts." and "Sundries," you save much time, because the same accounts are represented several times. Put the record of the transaction in the broad space at the left, and the amount of each item in its respective column, and you will be able to see at once where the money comes from and where it goes, and act accordingly.

These books being provided, the next in importance is an order-book, to contain all the items concerning each order that are necessary in filling the order, or for future reference. All these items should be assembled in one place, and an index made to facilitate finding them. A book can be made something after the style of the foregoing cash-book, with columns of suitable width to write in the details, each order occupying one line, having a page the same size of the others, but made from double-cap paper, and having the hinge on the short side. On some accounts this is the best book, perhaps the most economical, but I prefer one made differently, as more convenient to fill out and refer to. My plan is to have a book the same shape and size as the others, and divide the page by a line down through the centre, and three lines across the page, making eight equal spaces, one for each order, $3\frac{1}{8} \times 4$ inches each, with heading at the top. Then have printed in each the fol-

lowing items, with blanks to be filled out as the case required.

Sample ticket to send to the operator, of any suitable size:

Name of Subject.....
Address.....
Kind of Pictures.....
Time, or Number.....

Sample square:

Date.....
Name of Subject.....
For whose Order.....
Address.....
Kind of Pictures.....
Whose Club, or Deposit.....
Directions for Proof.....

Date of Second Sitting.....

“ Third Sitting.....

Date of Order.....
Quantity.....
Style.....
Special Directions for Finishing.....

When Promised.....
Merchandise Ordered.....
Order for Delivery and Payment.....
Amount due.....
Price.....

Total.....

When and how Delivered.....
Paid \$....., date.....or charged page.....
to.....
Memoranda.....

The book should have an ample index.

I find that these items cover all the essential facts in the majority of cases, and I cannot spare any of them, and might add to them were I having a new book made. The first part, down to the dotted line, is filled before the sitter goes to the dressing-room; the second, when the order is given from accepted proof, and the third when the pictures are delivered. There is an index in the front of the book, so that an order is easily found, because the names of the day's new customers are indexed every night, and any uncompleted order must be among the later names under the proper letter.

Each sitter carries to the operator gummed tickets to put on the negatives, with his name, address, kind of pictures, and time of sitting, or number, giving order of rotation. Each proof has only its name on it, and with the order-book before you it is easy to send the proof as directed, with no mistakes as to names and numbers from careless writing in the printing-room. When the proof comes back accepted, the order is entered in full in the second part of the blank belonging to this person, and directions for printing put on the proof, which goes with the order until ready for delivery; and there may be pasted on the margin of the order, or in another book, with its name and date, for identification in future, and thereby save much time and trouble in finding negatives for duplicate orders, without sample pictures. In case of a child's picture, it is necessary to get its own name as well as that of the person bringing it; it certainly is in the case of a copy, picture of machinery, etc. The above form will cover nearly every order that will be brought. If I was going to have one for copies finished in crayon or colors, I should have it different. Parties who do not wish to go to the expense of having a book of printed blanks made, can take a blank ledger, with an index, and divide the page by three cross lines, using the centre line, and discarding some of the other down lines, then make, on stiff card-board, a square, with the items in the same order as though they were written to assist the memory, and make sure no item has been omitted. Each order and proof may be numbered so that the printers may put them forward in the right order.

When the order is delivered, the memoranda which belong to the order will naturally be referred to to see if it is all correct, and for the amount due; then is the time to fill out the third part of the blank, and it will be found almost as useful as the preceding parts, and the whole form the most compact, comprehensive method of keeping orders straight that I know of. Every order for pictures, whether first, duplicates, or copies, or merchandise, and then there is no uncertainty; and don't be afraid of writing all you know about an order, leave nothing *essential* to be carried in your head,

for, perhaps, your head may be unavoidably absent some morning.

Some, in addition to this, give the customer a slip to certify the payment of the deposit, etc., but that is useless, for it is so frequently forgotten, or lost, that it soon becomes no guarantee if returned or filed, and the more of such things you have out the more times you will be bothered to know true from false claims. All that is required is some simple method by which *you* can tell all your transactions relating to an order, and thereby get and keep a reputation of being a clear-headed, honest photographer, which will be worth almost as much to you as artistic skill.

The best way to keep negatives for future orders, is to enter them in a book, long- or broad-cap size, indexed *through*, on the "bookbinder's irregular scale." Having put them in paper bags, with the sitter's name on them, also put on the date, and tie them into bundles of twenty-five, or what can be handled easily, and put the number of the bundle on each bag, and the same number in the margin opposite the group of names to be found in that bundle, keeping those beginning with the same letter in one month together as much as possible. Now place the bundles in numerical order, and you have the greatest number of negatives stored for easy reference and safe keeping, at the least expense of money and trouble; paper bags are the most expensive part of it, but they pay. If a negative of Mrs. Smith is wanted, look under S. until you find it, and note the number of the bundle, and you have but twenty-five at *most* to look over, and it will come out clean and unscratched, with very ordinary care. Be sure that each negative that goes from the dark-room has the items for registering in the negative-book plainly written on it, either by a pasted slip or plainly scratched, such items as name, address, number, and date. So much for the books.

There is nothing so annoying as to know less about an order than the patron whom you are dealing with, and have to leave yourself to his mercy or honesty about the contract or payment; and nothing more annoying to a customer as to hear, "The man has gone out, and I cannot tell anything

about your pictures; you must come again sometime, and maybe he will know."

These books do not "keep" themselves, but, properly used, will give a man backbone, so that he can look his customers in the eye and say honestly, "I am glad to see you."

I have put these things on paper in this shape, thinking, perhaps, some would thank me for it, and will start with a true compass and clear sailing directions, and make good use of the breeze which begins to freshen.

Should any one wish more complete directions, or for books made after these patterns, I will furnish them, though I have no axes to grind, but shall be pleased to assist a brother photographer through you.

BENJAMIN NEWTON,
Rooksville, Miss.

ACETIC ACID.*

BY PROF. E. B. STUART.

I PROPOSED treating, this evening, "Acetic Acid and Sulphate of Iron," the two chemicals that received most discussion at the last meeting of the society, but the first subject presents so many points of interest that I shall confine my remarks to that, reserving the iron salt, which can be more briefly disposed of, for a subsequent evening.

The most appropriate matter to bring before a society of this kind, is, unquestionably, that having a direct bearing upon the art which called the society into existence, and which can be readily converted into money, so to speak, by the members. It is, however, hard to draw the line exactly between the theoretical and practical, between science and art; just as, in nature, the exact boundaries between animal and vegetable life are uncertain and in controversy. I have, therefore, taken the liberty to introduce into this paper some matter which is purely chemical, trusting that the intrinsic interest of the subject would be a sufficient apology for the time it will occupy.

In order to understand clearly the nature of acetic acid, to comprehend the principles

* Read before the Chicago Photographic Association, September 8th, 1880.

involved in its manufacture, or to intelligently test its purity, it must first be known what acetic acid is, how related to other substances, and what impurities are likely to be present. If I say that the chemical in question contains four atoms of hydrogen, two of carbon, and two of oxygen, I am stating a chemical fact, but convey, I dare say, no very vivid impression to the minds of most present. I will, therefore, spend a moment in illustrating the relation of some related organic substances.

$C_6H_{10}O_5$ = Cellulin.

" " " = Starch.

$C_{12}H_{22}O_{11}$ = Sugar.

$C_6H_{12}O_6$ = Glucose.

C_2H_6O = Alcohol.

$C_2H_4O_2$ = Acetic Acid.

These formulæ, you will observe, have quite a similar appearance, each substance containing the same elements in, with one exception, different proportions; and last, representing our subject, acetic acid, has fewer atoms than any other of those compounds. Now, commencing at the top, any of these substances can be made in the laboratory, from any one above it, with the exception of starch, which has the same atomic composition as cellululin. The methods by which these decompositions are effected, will naturally engage our attention. Therefore, commencing with the first, which is essentially the conversion of wood into vinegar, several different processes, which can only be touched briefly, are in large commercial application. The essential feature of this operation is the decomposition of wood by heat out of contact of the air. If air, or its active element, oxygen, were admitted, the ordinary decomposition would ensue. In other words, the wood would take fire and burn up, and the manufacturer would have carbon dioxide (carbonic acid gas), and the minerals ordinarily present in wood left as ashes. This, in chemical parlance, would be a complete decomposition, and would not, as you see, serve the purpose in hand; the operator, therefore, subjects the cellululin to a high degree of heat in a tight iron oven, when it is changed, partly into acetic acid, partly into creosote, benzole, etc., all of which, rising in vapor, are con-

densed in suitable vessels, and certain inflammable gases are conducted back into the fire and made to assist in the decomposition of the wood remaining in the oven. From three-eighths to nearly one-half the weight of the wood used is obtained as crude acetic acid, and from one-eighth to one-fourth left in the retort as charcoal. It will occur to some, no doubt, that the operation is very like that of gas-making, as ordinarily carried on. I have only mentioned this method in the most general manner possible; a faint idea of the services contributed by chemistry to our ordinary wants, as well as of the magnificent economies of modern civilization, may be gained by stating the fact that the spent dye-stuffs of large manufactories, the refuse bark of tan-yards, and saw-dust from various mills, all otherwise useless, are utilized in this manufacture. The crude acid produced by the destructive distillation of wood is known in commerce as pyroligneous acid, and contains, as previously stated, besides acetic acid, tar, creosote, benzole, and other substances. While the detail operations of purification vary widely, the general features are as follows: The liquid is distilled first at a gentle heat, by which the benzole is separated; then by the application of a higher degree of heat, the acid, still very impure, distils over, leaving the tarry matter in the retort. The second distillate, containing the acid, is then treated with lime, with which it combines, forming the acetate of lime, which can be obtained in crystals, and subjected to various operations of purification, according to the quality of product desired, and, finally, the acetate of lime is in turn decomposed by the addition of sulphuric acid, which unites with lime to form a sulphate, *i. e.*, plaster of Paris, and sets acetic acid free. The operation is shortened in some cases, *e. g.*, Pauer's method, which consists in presenting to the acetic-acid vapor, as it is formed during the carbonization of the wood, a substance which can seize exclusively upon it, and thereby concentrate it. The bodies which will most fully satisfy the conditions of this method are those alkalies whose acetates are not decomposed by the temperature of the operation, such as potassa, soda, lime, and magnesia, the preference varying in

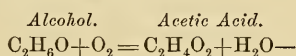
different places with local conditions of supply, etc., and in establishments where wood is treated for acetic acid to the exclusion of other products, charcoal, creosote, benzole, etc. This process offers such marked advantages in the way of economy of time, fuel, and purity of product, that it has been largely adopted.

It has been stated that starch, which you well know is an important constituent of plants, has the same composition as cellulose. Chemists refer to this phenomenon, an identity of composition attended with different physical and chemical properties, by the term *isomerism* (a word made up of two Greek words, meaning equal and part), and explain it by supposing the atoms to be grouped in a different manner. Oil of lemon and turpentine furnish a familiar instance; but the point I wished to call to your attention is, that of late years a demand has arisen for wood-fibre in the manufacture of paper. The useful part of wood to the paper-maker is a substance isomeric with cellulose, termed *lignin*. The ingenuity of a chemist was equal to the production of acid, etc., from the portions of wood unsuitable for the paper-maker, leaving the lignin in better condition for his use than in the original block—another instance of modern economy upon an article of extremely low value, that, owing to the magnitude of the operations covered, affects vast sums.

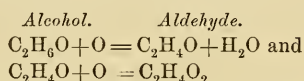
The preparation of acetic acid from starch, sugar, and alcohol may be disposed of under one head (and briefly), as each compound is one step in the operation. The first, commencing with starch, which, from our standpoint, may be regarded as young cellulose, is the conversion of starch into sugar. This may be accomplished by boiling it with acids, or by fermentation. The former method is practised on a large scale in the factories devoted to the manufacture of artificial sugar, or glucose, while all our alcoholic liquids are made by the latter process. These, therefore, may be lightly passed over, and the methods of converting alcohol into acetic acid brought before you.

The conversion of cider into vinegar by the fungoid plant, that you are all, no doubt, familiar with as mother of vinegar, is one of the best known and most ancient methods

of making acetic acid, and is still practised on a large scale in many countries where alcohol is not subject to a heavy excise tax. The chemical reactions attending this operation are essentially of oxidation, and may be formulated as follows:



The oxidation is supposed to take place by two reactions, with the production of an intermediate body, aldehyde, thus:



Different modes of accomplishing this oxidation are in commercial use; we will only consider the German process, which will serve as a type. Warm vinegar is poured over beech shavings, contained in a vat with a false bottom, by which a sufficient quantity of the plant previously referred to (mother) is deposited, to start acetification. This is followed by the alcoholic liquid, which is passed through the shavings two or three times before acetification is complete.

Acetic acid is also made from alcohol by direct oxidation with finely divided platinum, but not on a commercial scale at the present time, on account of the loss of spirit by volatilization, and the production of aldehyde; and finally, by the action of ozone, or triatomic oxygen, on alcohol. This latter idea is due to an American, Mr. Wideman, who established a factory at or near Boston, in 1869, primarily for the ageing of liquors by the ozone process, which was afterward extended to the manufacture of acetic acid.

The photographic use of acetic acid in retarding and controlling the action of reducing agents is too well known to the members of this society to dwell upon here. We will, therefore, pass to the discussion of the impurities most frequently found in the commercial article.

Among the most objectionable to photographers is the empyreumatic oil, mentioned as among the products of the destructive distillation of wood. As nine-tenths or more of the commercial acetic acid used in the United States is made by that process, and as, if present in appreciable quantity, it

causes a uniform reduction of silver over the entire plate ("fogging"), its presence should be carefully guarded against, by both dealers and operators. The simplest test for this compound is the sense of smell; but as the pungency of acetic-acid vapor masks its presence, it is necessary to neutralize the acid by the careful addition of caustic alkali, such as potassa; the ordinary caustic potassa of the drug-stores dissolved in water (say, one ounce to a pint) makes a convenient solution, or ammonia may be substituted. If, however, a little excess of the latter reagent be inadvertently added, that drop too much will mask the odor we look for quite as effectively as the acid itself. As a hint to the proper manipulations, let me suggest that a small quantity of the acid (say, half an ounce) be poured in a graduate, a slip of test-paper added, and then the alkali, rapidly at first, then drop by drop as the saturation point is approached, until the paper just changes to blue. Now smell it closely, and the impurity will, if present in quantity, betray itself by a peculiar smoky odor, something like that of creosote. A confirmatory test may be made by adding to the mixture a few drops of a solution of potassium permanganate, just enough to tinge it faintly pink, and gently warming in a test-tube; the solution quickly loses its color if empyreuma is present even in traces.

Tannin is frequently present in considerable quantities, from the inexcusable practice of shipping the acid in barrels, to save high rates of freight on glass carboys. Now, although tannin has its uses in dry-plate photography, or has had at least, it is a fatal impurity in a developer used with free nitrate of silver, as an instantaneous reduction takes place all over the plate, and which sometimes extends its blackening operation to the operator's hands. Mere traces are enough to furnish a reason for returning an acid containing tannin, and a few drops from your silver bath may be used as a test for its presence: if the acid blackens, tannin is indicated. Sulphuric and muriatic acids are sometimes met in acetic acid. The former is harmless in a developing solution, and the latter would possibly cause a superficial deposit of chloride of silver in the quantities likely to be present. Sulphurous acid is more

frequently found, but is not a serious impurity for photographic use.

A solution of barium nitrate added to acetic acid containing H_2SO_4 gives a white precipitate; H_3NO_3 behaves in the same way with HCl , and bichromate of potassium gives a green color with H_2SO_3 .

Metals are sometimes present from carelessness in handling, as the use of iron, old tinned, or copper measures, and lead may be taken up from the ordinary glazed earthenware containing that metal. The first, iron, is without injurious action on the photographic plate, although it sometimes imparts a slight red or yellow color to the acid. Over-saturation with ammonia, *i. e.* adding ammonia until its smell is perceptible, throws down the iron as a red gelatinous precipitate. Hydrogen sulphide throws tin and zinc out of solution as white precipitates, and copper and lead as black precipitates. These tests are, however, of minor importance.

The only remaining point to which I shall call your attention is the determination of the strength of the acid. In a rough way this may be determined by dissolving $33\frac{1}{2}$ grains of bicarbonate of potash, which should exactly neutralize an ounce of the acid in any given quantity of water, and adding the solution to an ounce of acid till effervescence ceases; then the amount of bicarbonate solution remaining will show the deficiency in strength of acid. To illustrate, suppose that the potassium salt was dissolved in just enough water to make one hundred fluid grains, then, if the acid is of full strength, all will be required; but if effervescence ceases when 90 grain measures are added, it is deficient to the amount of one-tenth; if 85, one-fifteenth, and so on.

Now, these tests, correctly applied, constitute a tolerably full commercial analysis of acetic acid, and with a little practice any photographer can so use them. No expensive apparatus or reagents are necessary, and the advantage of being able to conduct our examination of this kind will amply reward the efforts necessary to attain the qualification.

ROBINSON'S *Pictorial Effect* should be in the hands of every aspiring photographer.

SOCIETY GOSSIP.

CHICAGO PHOTOGRAPHIC ASSOCIATION.—The regular monthly meeting was held in their rooms, College of Pharmacy building, on Wednesday evening, September 8th, President Rocher in the chair.

Minutes of last meeting read and approved, and there being no proposals for membership, and all other business being disposed of, the balance of the evening was taken up in a manner calculated to arouse much interest. Professor Stuart, whose kindness and thoughtfulness were much appreciated, gave an illustrated paper on "Acetic Acid." Not content with simply preparing a paper, Prof. Stuart brought with him all the chemicals and apparatus necessary to illustrate practically his remarks. The paper is on file, and will be forwarded to the *Philadelphia Photographer* with these short minutes.

It is to be regretted that a larger representation of the society was not present, as these practical demonstrations are of immense value.

A vote of thanks was given to Professor Stuart for his interesting and instructive paper.

On motion, adjourned.

J. E. BEEBE,
Secretary.

ANOTHER regular stated meeting of this Association was held at their rooms on Wednesday evening, October 6th, President Rocher in the chair.

The Society met this evening without having any set subject for discussion, and at the outset it did not promise to be of any particular interest, but after the reading of the minutes of last meeting, which were duly approved, it was turned into an experience meeting, and a very pleasant and profitable evening was spent.

In lieu of other and more interesting matter, the Secretary gave the history of a new two-gallon-and-a-half bath that he had prepared with the utmost care, but which, when he came to use it, gave foggy, insensitizing plates, and he asked for light.

MR. ROCHER.—I will give my experience in that direction, which is, that fog of that description is often formed by the adherence of acid to the plates in cleaning.

MR. SMITH.—What was the character of the fog? Was it in the film, or was it a deposit that could be rubbed or brushed off with the finger?

MR. BEEBE.—I had all styles; some in the film, some on top, some under it; but most of it was the fog caused by a granular deposit that could be rubbed off.

MR. SMITH.—If the acid condition of the bath does not cause it, it is organic matter; and if you will take about an ounce of permanganate of potash, about currant-wine color, drop it into your bath, stir well with your dipper, then coat a plate, and after it is coated throw it away, as the first plate after the permanganate treatment seems to have the power of attracting all organic matter undissolved or set free, you will find that, commencing with the second plate, your bath will work nicely and rapidly.

MR. ROCHER.—I think a more diluted solution than Mr. Smith speaks of would be better; but, perhaps not, if the first plate or two is discarded.

Mr. Smith gave a valuable hint to the Society in regard to filtering solutions, which was to use wash-leather or chamois-skin in the filter, it being good for everything that needed filtration, but especially fine for the positive bath in freeing it of albumen.

Before leaving the fog, Mr. Smith also gave a very curious and interesting description of a fog-trouble that had lasted him for several months, in spite of every precaution, and the entire renovation of baths, collodions, developers, etc. Finally, he accidentally saw on one of his clear plates (a ray of sunlight striking it) what looked like gold-dust, and in a moment he knew where all the trouble had come from.

He uses bronze printing on his cards, and has his assistants rub each card before mounting the prints; as fast as prints are mounted they are laid between sheets of wrapping-paper to dry. It seems that his glass-cleaner had each morning taken one of these sheets to cover his freshly cleaned and albumenized glass, without noticing the bronze-dust remaining on it, and treated the whole batch of plates to a dry-metal bath. That assistant did not repeat that blunder.

MR. GREEN.—I would mention that a very good way to discover whether, in cases

of trouble, it is due to the plate or chemicals, is to take an albumenized plate and rub it carefully with a tuft of cotton moistened with alcohol. The alcohol coagulates the albumen, and about five per cent. of it remains on the plate. After polishing, your plate will be perfectly clean; and if foggy, trouble can be looked for elsewhere.

MR. KLEIN.—I have sometimes been troubled with what I call rusty glass, which, when albumenized, feels rough and gritty to the fingers, and spoils fine effects.

MR. BEEBE.—I would like an expression from the members in relation to their experience with fixing agents, as I notice in some of the journals that hypo is much recommended, both on hygienic and photographic principles.

MR. ROCHER.—I have been giving that subject considerable attention, and have almost concluded to discard cyanide altogether; of course, to our eyes, accustomed to the yellow, creamy film of cyanide, the grayer one of hypo is not so pleasant; but I will investigate further and report.

MR. KLEIN.—By using caustic soda, in the proportion of one part to four, in cyanide, I find that all odor is done away with. I use both agents in my work.

MR. GREEN.—I use cyanide for landscape, and hypo for portrait work.

MR. SMITH.—I say hypo for weak negatives, cyanide for strong ones. I find that cyanide dissolves in a regular and even manner hypo in spots.

MR. ROCHER.—We will make this matter of fixing agents one of the subjects for our next meeting; in the meantime, I want to again urge upon the Society the need of an exhibition here of specimens of our work, our successes, and our failures. We are about to enter upon our winter's work, and should do everything possible to assist each other in making it a profitable one. Subjects for next evening, "Collodion" and "Fixing Agents."

On motion, adjourned;

J. E. BEEBE,
Secretary.

THE BOSTON PHOTOGRAPHIC ASSOCIATION.—A meeting was held at the studio of Mr. J. W. Black, October 6th, at 7½ o'clock, with President C. F. Richardson in the

chair. The minutes of the last meeting were read and approved. Interchange of thought on the dry-plate process was the subject given out for discussion, but there was so much other business of interest which came before the Association, that it was omitted for the evening.

Mr. E. F. Ritz was present, and made some sensible remarks on the way to make the meetings still more interesting. He suggested that an album belonging to the Society (which has not been seen for several years) should be looked up and brought to the gatherings, and that contributions of photographs be brought in to fill the balance of the space.

Mr. Ritz showed some of his work, made when in New York, which were beautiful pictures in all respects.

Mr. E. J. Partridge showed a head-rest attachment of his own invention, which was praised for its simplicity; a single thumb-screw setting the attachment, which acts as a universal joint. It is applied to the common head-rest, and two or more of them can be used on the same rod for two heads, when wanted near together, and also for back-rests.

Mr. W. A. Webster, of Waltham, and Mr. T. H. Blair, of Boston, were voted into membership. The financial standing of the Association was examined and found to be all right.

The meeting then adjourned.

W. H. PARTRIDGE,
Secretary.

ASSOCIATION OF OPERATIVE PHOTOGRAPHERS OF NEW YORK.—The last meeting of this Association was held at Beethoven Hall, October 20th, 1880, Vice-President Shaidner in the chair.

Minutes of previous meeting were read and approved.

Committee reports placed the standing of Association first-class. Where photographers wished good workmen, they had taken pains to send only such; entire satisfaction had been given, and its objects were being fulfilled.

A magnificent gift of a number of books on photography, from the Scovill Manufacturing Company, with letter, stating that the *Photographic Times* would be sent regu-

larly, was received and accepted; and the Secretary was ordered to write that a unanimous vote of thanks was passed and tendered them.

T. J. Walker was elected President, in place of President Coffin, who offered his resignation, as he had accepted an engagement with Washburn, of New Orleans.

The Treasurer's report showed that the finances of the Association were in a favorable condition.

A. H. ATWOOD,

Secretary.

513 E. 117TH ST., NEW YORK CITY.

PHOTOGRAPHIC SOCIETY OF PHILADELPHIA.—The first stated meeting of the season was held Thursday evening, October 7th, 1880, the President in the chair.

The minutes of the last meeting were read and approved.

The present officers, with the exception of the Secretary, were nominated for reelection. Mr. Charles R. Pancoast was nominated for Secretary.

Mr. Samuel Casner was named for membership.

Mr. Edward L. Wilson sent to the Society a series of views made, during his summer vacation, at the Dixville Notch, N. H. Mr. Carbutt's plates were used; forty-five seconds' exposure. They were thought very successful; and a vote of thanks was tendered to Mr. Wilson for the donation.

Mr. Carbutt exhibited a large number of stereoscopic prints, which had been sent to him by a Western photographer who had used Carbutt's plates exclusively during a trip of over three thousand miles around the upper waters of the Missouri River. Many of these plates—all of which were very fine—had been developed more than six weeks after exposure.

Mr. Corlies brought a number of groups and animal pictures, also made upon Mr. Carbutt's plates. These were very much admired, and it was thought nothing better of this class of work had ever been shown before the Society.

On motion, adjourned.

D. ANSON PARTRIDGE,

Secretary.

THE LATE CONVENTION.

CHICAGO, October 19th, 1880.

THE final meeting of the Executive Committee of the late Convention was held last evening at the office of G. A. Douglass, Mr. Hesler in the chair; present, Messrs. Rocher, Gentile, and Copelin. Mr. Copelin presented his report as follows:

Total cash subscriptions received,	\$585 00
“ “ Initiations “	527 00
Receipts from Banquet Fund,	14 00
Total, . . .	\$1,126 00

Expenses.

Postage, Telegraph, Exchange, and Express, . . .	\$34 15
Printing and Stationery, including 500 copies of the new Constitution, . . .	90 00
Expenses of Convention, including fitting up exhibition-room, etc.	205 46
Advertising, etc., . . .	85 89
Rent of Fairbank Hall, . .	50 00
Banquet at Grand Pacific Hotel, .	375 50
Voted to Secretary, . . .	100 00
Five per cent. Salary of Treasurer,	56 30
Five per cent. Salary of Secretary,	56 30
Cash on hand, . . .	72 40
Total, . . .	\$1,126 00

The assets of the Association are:

Subscription due by Mr. Gerhig, .	\$10 00
“ “ Mr. Hugh Burch, .	5 00
Material sold and unpaid, . .	10 00
1 Pelgrif Retouching Pencil, .	15 00
Cash on hand, . . .	72 40
Total, . . .	\$112 40

The report, accounts, vouchers, etc., were audited by a committee consisting of Messrs. Douglass and Gentile, and being found satisfactory, they so reported; and the report was signed by all the Executive Committee, and a formal transfer of the books, papers, etc., was made to Mr. Douglass, the new Secretary, and to Mr. Hesler, the new Treasurer.

ALEX. J. W. COPELIN,

Secretary.

MR. WILLIAM BELL, photographer, Cincinnati, O., committed suicide by blowing out his brains. He had shown signs of a disordered mind for some time, by becoming violently excited upon various trivial occasions.

OUT-DOOR WORK MADE EASY FOR EVERYBODY.

THERE are thousands of photographers, and ten times as many more of ordinary people, who would gladly take an occasional day out of doors with the camera for recreation and profit, did they not dread the actual labor which it has, until late days, entailed upon them.

Even those who are accustomed to coating and dipping and developing plates, shrink from carrying so much luggage along as the working of the wet process in the field requires, when going out as much for pleasure as for work, for instead of a pleasure it becomes a burden.

For years it has been promised by dry-plate enthusiasts, that things should be "different," but uncertainty and frequent failure made us all slow about trusting much to dry plates. More recently the emulsion plates of various kinds have given us more hope.

How the tide was turning, may have been noticed by many, when, last year and this year, during the excursions of the Photographic Society of Philadelphia, few but emulsion plates were exposed. Perhaps no American is more entitled to credit and praise for the plucky and persistent manner in which he has evinced his faith in emulsion than Mr. Henry J. Newton, of New York. Through and with his manufacturers, Scovill Manufacturing Company, 419 and 421 Broome Street, he has labored so constantly with the emulsion process and experimented until he secured certainty of working and splendid results to a degree greater than that of any other man. To their efforts we are largely indebted for the courage and faith which they have inspired in others who have followed. Praise be to them!

It is in order to assure our readers how much they may be now able to enjoy and obtain in the department of out-door work, with scarcely any outlay of labor, that we shall prepare a paper or two under the above caption, hoping to lead many to pleasure and profit.

In the beginning of this new era, good, light-tight, substantial, and economical apparatus for the purpose was quite as much a

felt want as proper plates and easy-working emulsions. Always "to the fore" in supplying promptly the actual needs of photographers, Scovill Manufacturing Company came to the rescue, and have, through their American Optical Company's works, given us some of the most desirable and excellent apparatus that one can ask for. As we are about to take a turn in the field together, then, let us first look at the matter of

APPARATUS.

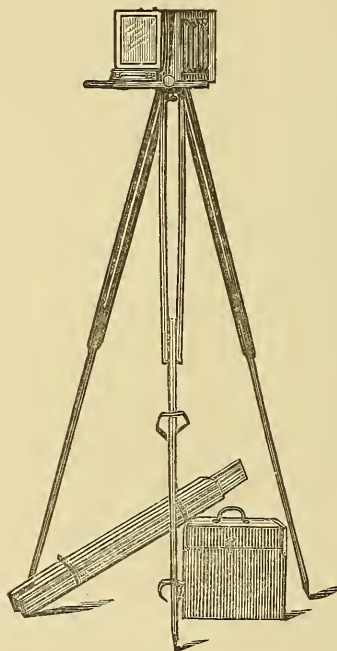


FIG. 1.

The drawing above represents one of the Camera-boxes of the American Optical Company, known as the '76 Pocket 5x8 dry-plate camera-box. It is a model of lightness, compactness, general excellence, and perfect workmanship. It is supplied with one double dry-plate holder, which is also very light. (Of course, additional holders may be had in any number.) It has also a movable central piece, to be inserted when used as a stereoscopic camera, a swing-back, a sliding front, and an attachment for using the camera vertically when the horizontal plate is not suitable for the

subject in hand. No convenience can be wished for that it does not have.

In old times what was known as a "dry-plate changing-box" was used instead of these double holders. The plates were put in a grooved box, necessarily heavy, supplied with an automatic slide which opened as the holder was drawn across a slot in the box. Then the box was turned upside down, and the plate falling into the holder was there made fast, ready for exposure. Upon the holder being withdrawn the slot closed, and the plates remaining in the changing-box were protected from the light. Such a method, however, was often a bothersome one. Should the plate be a trifle large it would not come out from the box, or enter the holder, and then had to be passed over, no matter how much shaking and display of temper were given in the effort to make it work right.

Therefore, such "changing-boxes" have become about obsolete, and the neat, light,

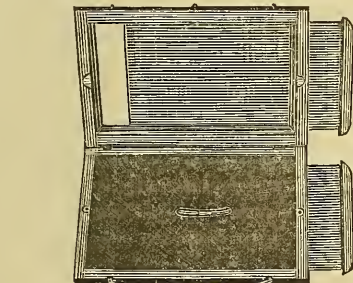


FIG. 2.

well-made double holder of the American Optical Company has taken its place. Fig. 2 illustrates one of these holders. It will be seen that two plates may be inserted in it, back to back, and as the upper edge of a series of holders is numbered 1, 2, etc., there can be no danger of a double exposure on the one plate.

The slides are made of tough bookbinder's or "fuller's" board, shellacked, and insured in place up to the time of actual exposure by catches (see Fig. 3). We cannot see how any contrivance can be more handy. At least six of these double holders should go with each camera, thus enabling the operator to carry twelve plates.

The 5 x 8 camera-box described, and the

six double holders are all supplied in a neat outside case, hooked and handled, and

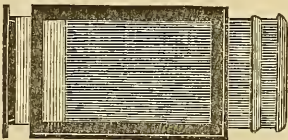


FIG. 3.

weighing but ten or twelve pounds. This, with the proper lens and focussing-cloth, is all you want for your field operations. Of course, other sizes are made—*any and every* size—but we describe what is most desirable and popular, unless it be stereoscopic size.

As to the lens, we must express our decided preference for the Morrison Wide-Angle View Lens, say six-inch focus; or for groups the No. "C," Group Lens. What may be done by such an outfit, our readers will see by referring to the picture in the current issue.

We have had the greatest pleasure and success with these articles, and cannot hesitate to most warmly praise them for their satisfactory working in every respect. Of course, there is much of other apparatus to be had in the trade. We recommend you to procure the best. Of "Plates and Exposure," we shall have more to say in our next number. Meanwhile our advertisements can be referred to. Each worker should carefully, at the time, take down the data concerning his views, and for this purpose little slips or books should be used, printed about on this plan, the pages being, say, twice as long:

No.	Holder.	Date.	Lens.	Aperture.	Exposure.	Subject, Process, Light and Observation.	Time of Day.
...
...
...
...
...

When the plates are brought home for

development, all these points will serve as a guide. Thus accoutred, the holders filled with plates, we are ready to go out into the field.

(To be continued.)

GERMAN CORRESPONDENCE.

Imitation of Artists' Studios and Artists' Work by Photographers—Photo-zincography in the Service of Art—Formulae of the Imperial Printing Establishment at Vienna—Eder's Varnish for Collotype—New Process for Reproducing Drawings in Fatty Ink.

It is an old and important rule in photography, that the photographer who aspires to bring his productions up to the highest artistic standard, and to produce nothing which is not truly artistically beautiful, must let himself be governed by artistic principles, just like the true artist; and, as far as this maxim is concerned, the artists and their works will always remain a guiding star, well worth being consulted by the photographer.

But shall we imitate everything the artists do? I answer, no. We do well to adopt their principles, but must not carry them farther into practice than is compatible with our technics.

This rule has often been misunderstood. Painters and sculptors have usually their studios painted dark brown, because the dark background "brings out" the figure of the person in the most advantageous way, and because, also, this background is the most "quiet."

I know some photographers who followed this practice, and caused their studios to be painted dark brown, the detrimental influence of which they found out afterwards. The walls reflected dark-brown light upon the shade side of the person, i.e., a chemically ineffective light. When one observed the picture upon the ground-glass, under the focussing-cloth, the brown color of the shades was distinctly visible, and, naturally, the pictures became correspondingly hard, which defect could only be remedied by placing a large blue-painted reflector between the side wall and the person.

This observation tends to illustrate the

fact, that not everything which is appropriate for artists is appropriate also for the photographer. Blue is the right color for a photographer's studio.

Another blind, and yet more harmful imitation of artists, was made recently by another photographer. He had seen that sculptors work in *ateliers* with very high ceilings, with very high top-light windows, and, in building a new studio, took special pains to make it twenty-five feet high. The result did not come up to his high ambition. The top-light was so extremely high that it did not exert any influence whatever; he could draw his curtains any way he pleased, but all his figures showed, from top to bottom, an equal, uniform side-light.

He had no other remedy but to build a platform, at a height of ten feet, in his studio, in order to bring his sitters nearer to the top-light, as he could not lower the ceiling of his studio.

For fourteen years, I have preached against high ceilings for *ateliers*, in books and pamphlets, and I hardly would have expected that, at this time, such gross errors could be committed, after all the bitter experiences of the last decade.

More yet than in the arrangement of the studios, some photographers imitate the portrait painter in poses and illuminations. Much as I would advise the photographer to take good models for guidance—and where could better models be found than in celebrated works of art?—yet due caution has to be exercised even in this respect.

Gustav Richter, the celebrated portraitist, once painted a lady in the act of descending a flight of stairs. The picture made quite a sensation; and a photographer at once had a pair of stairs built of wood, and painted to represent marble, exactly as the stairs in Richter's picture looked, as he was firmly convinced that his "stair pictures" would make just as much sensation as Richter's picture. In fact, his first pictures were much praised; but when his stairs appeared the fifteenth or twentieth time, the public began to banter him for his want of originality. He had quite overlooked the fact, that the charm of Richter's picture was certainly not due to the stairs, but to the wonderful harmony of

color, to the delicate shade of the flesh color, to the artistic working out of the character of the figure—all things partly or entirely out of the province of photography. Richter's picture would have been admired, also, without stairs.

Speaking of art, I must not omit to mention how, in these times, the art exhibitions draw advantage from photography. Last year already, the catalogue of the *Paris Salon* was illustrated with photo-zincographs, which had been taken from pen- or chalk-drawings of the originals, and, now, the *Salon* of Berlin has imitated this example.

The printing-blocks are obtained by zinc etching, in transferring upon the zinc plate a picture obtained with chromate (photography in fatty ink). These etchings are, however, far from being perfect.

I may observe that, of late, more attention is paid to the asphaltum process for this purpose. Of course, the slight sensitiveness to light of the asphaltum is found to be a drawback; but this defect has been partly overcome by using, in place of the raw asphaltum, asphaltum extracted with alcohol and ether.

I took occasion to mention once, in one of my previous letters, that the residue insoluble in alcohol and ether is the most appropriate for heliographic purposes.

Recently, the formulæ which the Imperial printing-office uses for the production of negatives for heliographs has become known. It is complicated enough, but as an excellent heliographer assures me that it is very good, and that he uses it practically, I give it to you here.

It is curious that therein a chlorine-iodine collodion is used, which, as everybody knows, was invented in America, when the bromide patent was yet in vogue.

A.—Collodion.

Ether,	500 grammes.
Absolute Alcohol,	400 "
Gun-Cotton,	15.6 "

The following chemicals are ground in 100 grammes absolute alcohol, filtered, and added to the clarified collodion:

Chloride of Calcium,	1.6 grammes.
Iodide of Cadmium,	7.8 "
Iodide of Ammonium,	4.7 "

The silver bath for sensitizing the plate is

prepared one to ten, and acidulated with nitric acid.

B.—Developer. Solution No. 1.

Sulphate of Iron Solution,	350 grammes.
in proportion one to ten,	
Radical Vinegar,	70 "

Solution No. 2.

Nitric Protoxide of Lead,	21.9 grammes.
Water,	350 "

Solutions 1 and 2, mixed, filtered and diluted with 350 grammes, make a developer which requires longer lighting of the negative than the following, but works out easier the finest lines, and is free from fog.

C.—Developer.

Water,	6.72 kilos.
Sulphate of Iron,	210 grammes.
Sulphate of Copper,	105 "
Acetic Acid,	210 "

This developer acts more energetically than the preceding one, B, and is mostly in use in the above-mentioned establishment. The fixing-bath consists of a solution, one to sixteen, of cyanide of potassium (17.5 grammes cyanide of potassium in 280 grammes water).

Two solutions, A and B, serve for intensifying.

Intensification A.—17.5 grammes of nitrate of silver, in 262.5 grammes of water, and in this solution a solution of 35 grammes nitric acid in 262.5 grammes of water is poured in a thin jet, which mixture will keep a long time.

A solution of 1.6 grammes pyrogallie acid in 100 grammes of water must be prepared fresh every day.

Intensification B.—A concentrated solution of bichloride of mercury in distilled water. (In case this causes streaks, it must be somewhat diluted.) Let it act until the layer becomes gray. As soon as the intensifier has caused a distinct precipitate upon the picture surface, intensifying with *B* begins; but the plate must have been first rinsed thoroughly with water. After the mercury precipitate has been lighted, a chloride of gold and sodium solution (4.37 grammes of chloride of gold and sodium in 350 grammes water), for further intensifying and coloring dark of the layer, is prepared and poured in a thin jet, under continual stirring, in a solution of 13 grammes

hyposulphite of soda in 350 grammes of water. This mixture can only be used in about one to two hours afterwards, and lasts, if kept in the dark, very long. The action of this liquid upon the plate is repeated until a dark tone is obtained.

From heliography to collotype (or artotype) there is only one step. It is understood that artotypes require a special varnish coat to make them as glossy as albumen pictures. This varnish coat was pretty well kept a secret. This much was known, that an alcohol varnish cannot be used, as it will penetrate. A so-called water varnish is used. Recently, Eder found out the composition of the varnish, and gives now the receipt for making the same: 300 parts water are boiled with three to five parts powdered marshmallow, for a quarter to half an hour, and then poured off. In the decoction are put 24 parts pulverized borax, 4 parts soda, free of water, and 100 parts pulverized and bleached shellac, and the whole heated again. After boiling a short time, the shellac dissolves into a dirty, yellowish liquid, which, after cooling, is filtered through cotton. In this watery varnish the paper is floated in the cold, and then hung up to dry. The marshmallow is necessary to impart a nice gloss to the picture; but the same results may be reached with other gum.

To conclude, I will report on a very interesting process to reproduce drawings in fatty inks that is patented by Mr. Van Ittersheim, in Vienna. In this process a paper is employed which is prepared in a similar way as the paper used in photo-lithographing with *lichtdruck*. It is lighted under the picture to be copied, in a similar manner as in the well-known "*lichtpaus*" process, and then placed, in a similar way, in the water, for development. By washing in the water, the sensitive preparation is removed from the spots which had been protected from the influence of the light, and on those spots the paper is laid bare, and prepared to receive fatty ink. When the whole surface is covered with a fatty ink or fatty color, and the paper then washed in a weak acidulated bath, the ink remains only on the previously bare spots, while the other inked portions, together with the substances which had been changed by the influence of

the light and remained there, are washed clean.

The inventor found that good results were obtained with the above-mentioned new process, if one proceeds in the following manner: A well-glued, smooth, drawing-paper is covered in a dark-room with a solution consisting of 25 parts good, pure, gum-arabic, 100 parts good distilled water, 7 parts bichromate of potassa, and 1 part absolute alcohol, and dried in mean temperature. Paper prepared in such a way, and kept in a cool and dark place, lasts a long time. To make copies, proceed as follows: Take a piece of the prepared paper of the size of the design to be reproduced (this design must be traced from the original upon white tissue paper, with bold, perfectly untransparent lines), place it in a photographic printing-frame in such a way that the side of the tissue-paper upon which the design has been traced lays upon the glass, and upon it the sensitized paper. Then press the two together, and light the drawing in the room with subdued light about five to ten minutes (it is well to consult Dr. Vogel's photometer). Now take the prepared paper out of the printing-frame, place it in a cup of pure, not too cold, water, rinse the sheet well, take it out of the bath; as soon as the lines of the drawing come out in bold relief, dry with blotting-paper, and let the bath dry the drawing out completely. As soon as the sheet has become perfectly dry, ink it with a sponge with an ink consisting of 5 parts common shellac, 100 parts absolute alcohol, 15 parts finely pulverized Frankfort black, and place it, in order to get washed, into a bath of from two to three per cent. sulphuric acid, in which it must remain until the ink may be easily removed with a brush. After this the lines of the drawing appear in black upon a white ground, and the picture obtained has exactly the appearance of a good autograph, with the distinction that the drawing does not show the slightest trace of distortion, but represents an exact *fac-simile* of the original.

Enough for to-day. This time I did *not* speak about the inevitable gelatin plates, but more about them anon.

Yours truly, DR. H. VOGEL,

BERLIN, September 30th, 1880.

FRENCH CORRESPONDENCE.

Photographic Art at Lyons and Marseilles—No Progress in Professional Photography—No Application of Industrial Processes—Gelatin-bromide not Used by Professionals, but largely so by Amateurs—Manufacture of Plates of Mr. Garcin—Causes of Failures made by Photographers in Using Gelatin-bromide—Disuse of the Carbon Process. Why?—Platinum Process still Unknown. What is the Reason?—The Electric Light as Used by Mr. Lumiere—Process of Mr. Van der Weyde, and Remarks Thereon—Establishment of Mr. Victoire; a very Important One, but Making Use of well-known Processes.

AFTER having spent two months in the south of France, I am now back in Paris; but I did not come straight home, as I wished to stop at Lyons, so as to ascertain what was being done in that city in a photographic point of view.

I could not make a better use of my vacation—at Marseilles first, and then at Lyons—than in making a practical investigation of the actual condition of professional photography.

In contradiction to those who assert that photographic art is progressing, I am, unfortunately, obliged to acknowledge that it is photographic science only that progresses, and that in a marvellous manner. As to professional art, it makes but little progress.

Now, here are two large cities—after Paris, the two most important in France. What progress do we find there? What application of the new improvements in photography? Is phototypy worked there? No. Photoglyphy? No. Platinum printing? No. Photo-lithographic and heliograving? Still the answer must be no.

In point of fact, in the establishments of the numerous photographers of these two important centres, I saw nothing but the ordinary work of wet collodion for negatives, and with chloride of silver, on albumenized paper, for positives.

It is not that in both of these cities some trials have not been made with the gelatin-bromide. At Marseilles, some few houses have used it, and still use it, with success. Many others, after having given it a short

trial, declared that it was good for nothing, and that there was no reason for giving up collodion.

At Lyons, they are still more decided; for, as a general rule, this process is rejected as being worthless, or, at least, as giving results in no manner comparable with those obtained by the wet-collodion process. At Lyons, however, there is a manufacturer of gelatin plates—Mr. Garcin—whose business is increasing and spreading through the whole south of France. The low price at which he sells his plates contributes largely to their popularity, but it is principally amateurs that use them. He prepares, so he told me, from five to six hundred daily, which he sells at about eighty-five cents a dozen (5 x 7 inches), the box and packing included. Well, photographers find this dearer than the plates collodionized and sensitized by themselves.

The relative want of success in using gelatin plates may especially be attributed to the ignorance, in regard to this process, of the greater number of photographers. It is not that practical treatises concerning this remarkable process are wanting. Formulæ for development abound, and all the photographic journals, at the present time, are filled with information. Messrs. Monckhoven, Stebbing, Bascher, and many others, have published precious monographs on this process, which, in reality, is very simple and easy. But what is the good of all this, if nobody reads it?

Most of the photographers that I saw seemed to be entirely ignorant of the manner of using gelatin plates. They tried them in a very superficial manner, and condemned them without remission. Among many of them, all the trouble came from too much light, either in the camera or in the developing-room.

"We obtain nothing but foggy prints," say they.

What is there astonishing in this, if they forget the most elementary precaution, which consists in verifying, by experiment, the light, and in operating only after having made sure that there is nothing to fear from this accidental cause of the fogs, which is wrongly attributed to the process itself.

I beg my worthy readers to remark that

I am no more the advocate of gelatino-bromide than I am the enemy of the wet-collodion process. To this last we owe very great services, and certainly we should not abandon it exclusively for a new process. But it is not right to omit taking into consideration the marvellous rapidity of gelatin plates, and the great facility with which they can be used in the dry state. At this double point of view, they offer great progress over wet collodion; and this is what makes me wish that the use of them should become more extended.

Photographic amateurs have found in them a most convenient auxiliary; for they have no longer any preparations to make, and, moreover, thanks to the development with oxalate of iron, they can have the pleasure of making portraits and photographic views without soiling their fingers.

Since paper sensitized with chloride of silver, prepared beforehand, may be purchased, it is no longer necessary to handle this product; and this, I repeat, is of great advantage to the amateur, men of the world, artists, etc., for whom it was so disagreeable to carry at the finger-ends this tell-taling mark of his photographic diversions.

The carbon process, little used in Marseilles, and especially for enlargements, is not more utilized at Lyons, where a few houses use it, but without satisfaction. It may be remarked that this process does not realize what was expected from it. It seemed that, little by little, a general application of it would be made for obtaining photographic prints of a large size, but, in France, at the present time, its use is very generally abandoned. I think that the cause may be found in the imperfections in the colored mixture papers made by the different manufacturers.

First, carbon prints are reproached with fading, as is the case in silver prints. This reproach, unfortunately, is well founded—not that a true carbon print will fade, but to obtain a photographic tone, insoluble coloring matters are now used, which are not carbon, but pigments, that absorb very rapidly the luminous rays.

Since the public taste requires these reddish tints, which, at the commencement of the use of albumenized paper, were so dis-

pleasing to the eye, it is necessary to give to all processes, be they carbon, phototypic, or photoglyptic, this chocolate tint, which more often can only be obtained by using unstable reds. From this cause comes the discredit thrown over the carbon process, as it gives prints that will fade. Another objection to this process arises from the fact, that the mixtures, placed mechanically upon endless rolls of paper, are composed in a uniform manner—that is to say, that the ratio of coloring matter to the quantity of gelatin varies little, whilst for each negative we should have a special mixture, more or less abundant in coloring matter, with relation to a same quantity of gelatin.

In regard to the platinum process, it is not better known and practised at Lyons than at Marseilles. It is strange that a process so remarkable, and which cannot be reproached with instability, should not have had more success among our photographers. In Paris, even, it is in the hands of none of our photographers, notwithstanding the efforts made to popularize it by our friend Stebbing, Director of the Platinotypy Society.

In my opinion, this affair has been badly started, by the fault—at least, I suppose so—of the London house. It was decided that no one could make platinum prints without paying an annual license of fifty francs. This price is not high, I admit, but, nevertheless, it is an obstacle. It would have been better to have left the platinum process free, reserving the right to sell the specially prepared paper. Profit would have been made on the quantity sold. But this is my personal opinion, and I may be wrong. In any event, we now may have a process giving easily prints of assured permanence, and we do not use it.

The cold, black, and slaty tone of platinum prints has also injured them greatly. This tone, however, in prints of a large size, has the value of a velvety-black, highly artistic and agreeable to the eye.

An effort, which merits to be signalized, has been made in a new direction by one of the first houses in Lyons. Mr. Lumière has purchased Mr. Van der Weyde's patent for lighting by electricity, and he has, at considerable expense, introduced into his

establishment all the appliances necessary for producing a powerful electric light. Lyons is, it must be said, a city in which there are frequent fogs, on account of its situation at the confluence of the Rhone and Saône, and Mr. Lumière hoped, in having a sun in the house, to be able to laugh at the fog and at his competitors. Up to the present time his hopes have not been realized; he has spent for this very complete plant about 80,000 francs (\$15,000), including the buildings annexed to his old establishment, and he is far from realizing from this expenditure the profit that he anticipated. This arises from a capital defect in this artificial light. The parabolic reflector, which projects the luminous rays on the sitter, is painted white on the inside. One is suddenly dazzled by this light, which is too strong for weak sights; the result is that the sitter has a constrained, sorrowful, and grimacing expression, so much so that often, after having operated with this artificial light, it is necessary to recommence the work in the natural light. This must certainly militate against this application if not remedied, and this seems to us easy. We had already made the same remark in the *ateliers* of Mr. Liébert at Paris, and nothing should be neglected to correct this painful dazzling, so injurious to obtaining a good result. This defect excepted, a defect which I think easy to remedy, prints thus obtained have a very good effect, especially when the subjects are accustomed to pose-actors for example. Mr. Lumière has reproduced a very fine collection of actors, some specimens of which I send to the worthy director of the *Philadelphia Photographer*. The artistic effect is perfectly arrived at, perhaps even better than with natural light. I fear that the great expense for producing a powerful jet of electric light will for the present place a serious obstacle to the general use of this artificial light, and it is not astonishing, therefore, that great interest should be shown in the experiments now made, notably by Mr. Laws, of Newcastle, for the purpose of substituting ordinary gas for the electric light. In this manner this great expense would be dispensed with, and with much greater ease a source of light would be obtained which

might be used as desired, either for the reproduction of portraits, or for any other photographic applications.

There is at Lyons a very important photographic house, whose very fine work deserves to be mentioned. It is the well-known establishment of Mr. Victoire. Several of his prints have been promised to me, and I will send some of them to our friend Mr. Wilson, to show to those who would like to see them. There are no photographers in Paris who do better work than Mr. Victoire, and his prints deserve a place among the most remarkable French productions. Unfortunately, this house, and the same may be said of all others, possesses no means of assuring the stability of its productions, and this will be for a long time to come. The organic defect of ordinary photographic prints, which at first are very beautiful, become pale, yellow, and end, alas! by entering into a state of decrepitude, from which it would be very desirable to save them. Perhaps the new process of Mr. Woodbury, if it should become popular, might obviate, in a certain degree, this regrettable decay of prints made on albumenized paper. Now that I have returned to Paris, I shall soon learn what has been done in this process, which is yet in its infancy, and what else there may be new in our world since I left it to roam in pastures new.

I purpose to do here as I did at Marseilles and Lyons. I intend to pay a series of visits to the principal photographers, to post myself in what is doing there, and report to my esteemed readers of the new world. I hope that the new photographic year, 1880-81, in which we are now entering, will prove fertile in interesting results, and nothing shall be wanting on my part to introduce them in your journal, which is always so complete, both in substance and in form.

In my next, something of what is being done at Paris.

LEON VIDAL.

PARIS, October 1st, 1880.

A CATALOGUE of stereoscopic views of western North Carolina, and other Southern scenery, from Mr. W. T. ROBERTSON, Asheville, N. C. The list contains over five hundred subjects, besides a description of the pleasant summer resort, Asheville, N. C.

NOTES AND PRACTICAL SUGGESTIONS.

BY A. M. DE SILVA.

(Continued from page 253.)

A FEW days ago, Messrs. Benjamin French & Co. favored me with specimens of Messrs. Voigtlanders' latest lenses for examination—Nos. 5 *b*, 5, and 5 *a*. Not having corresponding lenses of the older series to compare them with, I was unable to carry out my idea. Certainly, the lenses sent were most excellent as far as lenses go. One point in the mounting was a great improvement on the earlier lenses made by this house, they having adopted the burnishing in of each of the elements composing the back lens in separate cells, so that they cannot possibly become mixed up or set in a wrong position—a matter which will save many much trouble and confusion.

Now that a *furor* is being made over collodion enlargements, and being anxious to obtain any information which might be of service or interesting to the readers of this journal, I made my way, when in New York, recently, to the office of the Megatype Company, taking with me two negatives for enlargement, favorable for testing the process, the one a very thin one (made under disadvantageous circumstances—a little child in ill health, taken on a dull day, and which could not be retaken), from which they made an enlargement much better than a contact print could have been made from the original; the other, what would be termed a "plucky" film, full of detail, and giving a fine silver print. Although, from this negative, a fair enlargement was made, it proved, as I anticipated, rather against the operation; and if good results are desired, the negatives, unless the prints are to be worked up (which they can be, in color or crayon), must be kept thin. An especial feature which the demonstrator endeavored to impress upon visitors, was the ease and rapidity with which the enlarged copies could be made. In their prospectus, they state that "the cost does not exceed ten cents." That certainly is a low figure; but the value of the time occupied must be taken into account also.

There is an old axiom of the French col-

lodio-albumen printers, "To work cleanly, you must be naked and grease your hair,"—the least particle of dust ruining the picture. In making these enlargements, also, the greatest care *must* be taken to have everything used in the best of order, and absolutely free from dust or dirt, for it is all locked up between the paper support and the picture. The effects on porcelain glass were very much superior to those on paper, easier to produce, and certainly the most attractive. In England, especially among those of modest means, a large trade is done in these pictures, principally in what is styled "club work," carried out in a manner which, I believe, is unknown in this country,—a number of persons agreeing each to pay so much per week, and when sufficient money has been raised to purchase one or more pictures, lots are drawn as to precedence in sitting and receiving the proofs, continuing until all have obtained them; the photographer being at no loss, simply because he delivers work only when enough money is received to pay for it. Whether this would or would not succeed here, I am not in a position to state. That enlarged prints stand the chance of being more correct in drawing there is no doubt, on account of the greater distance between the camera and the sitter when the smaller negatives are taken,—in the majority of galleries a twelve-inch lens being the longest focus used, which would necessitate the placing of it in a most uncomfortable proximity to the sitter's nose, one cheek in consequence having the appearance of suffering from toothache and the other of being spoke-shaved down.

(To be continued.)

MR. J. TRAILL TAYLOR, known to our readers for the past fifteen years as the talented and able editor of the *British Journal of Photography*, came to this country about a year and a half ago, having resigned his editorial duties, and engaged with Messrs. A. & G. TAYLOR, 763 Broadway, New York, in a peculiar branch of photography, known as "club portraits in oil." The firm had various branch establishments in other of our principal cities, New York being their headquarters. Mr. TAYLOR now informs us that he has disposed of his interest in the business on terms mutually agreeable.

Editor's Table.

MR. L. W. SEAVEY, New York, desires us to inform our readers of his removal from Lafayette Place to his more commodious rooms, No. 22 West Washington Place, New York. Mr. SEAVEY tells us the distinguished actress, Miss SARAH BERNHARDT, will shortly be photographed by SARONY. Mr. SEAVEY is now engaged in preparing several new backgrounds, to be used on that occasion.

OUR esteemed friend and French correspondent, Mons. LEON VIDAL, sends us several boudoir portraits of actors and actresses, in character dress and pose. The pictures are very fine, and were made by A. LUMIERE, Paris, by means of the electric light. We are glad to see these samples of French work. Time was when American photographers looked to France for their best work, but now, in the words of Mr. SEAVEY, "some American photographers will out-Paris Paris."

AFTER our duties at the Chicago Convention were at an end, we had a little run through some of the most prominent towns of northern Michigan, among which we took in the beautiful city of Grand Rapids—a place we had long desired to see. While there, we called on Messrs. W. WYKES, 35 Monroe Street; M. W. OWENS, 29 Monroe Street; B. D. JACKSON, 35 Canal Street; W. JACKSON, 36 Canal Street; and JAMES BAYARD, 75 Monroe Street, from all of whom we received a most cordial welcome, and whom we found cheerful and busy. We also visited the pleasant city of Kalamazoo, where we saw, at their several business places, Messrs. PACKARD, VANSYCKLE, and W. S. WHITE. It was very gratifying to meet these old subscribers, whom we had known so long, some of them personally. Mr. WHITE was more than agreeable, and we had the additional pleasure of a long and interesting drive about the city with him and Prof. W. F. PARSONS, Principal of the Business College at Kalamazoo.

MESSRS. DOUGLASS, THOMPSON & Co., dealers in photographic supplies, Chicago, send us a copy of their September *Photographers' Bureau of Information*.

WITH our last issue, we closed the full report of the proceedings of the photographic Convention at Chicago. We employed a stenographer,

at our own expense, during the *entire* meeting of the Association, and we are the *only* journal who did so; therefore, ours is the only *complete* report. We still have a few copies of the September and October numbers, which we again offer for \$1 for the two.

PICTORIAL EFFECT IN PHOTOGRAPHY.—Read the review of the cheap edition of Mr. ROBINSON's admirable work—the best photographic art work ever issued. The price has been reduced so low that *any* one can afford to purchase it now, and *no* one can afford to do without it. Be sure you secure an early copy. Read the advertisement.

REMOVAL.—We are going to move. See advertisement of cheap books in our last issue, and buy now. Last offer. Notice of removal in our next.

A NEW photographic book, by the editor of the *Philadelphia Photographer*, is in preparation, and will soon be ready for sale. It will be prepared on an entirely new and original plan, and will, we believe, meet a want long felt for a straightforward, concise, and plain instruction book for the practice of photography. Please read the announcement on the cover, and future advertisements.

A NEW STOCK-HOUSE in Baltimore has just been opened, October 1st, by Messrs. BACHRACH & Bro., N. E. corner Eutaw and Lexington Sts. We have received the announcement circular of the firm, in which they offer a full stock of photographers' supplies, of the best quality obtainable, at the lowest prices. These gentlemen intend importing many of their chemicals direct from Europe, to insure purity. Give them a call before you order elsewhere.

RICHARDSON'S SENSITIZED PAPER grows in favor wherever it is used. For small galleries, or where immediate proofs are required, it is most invaluable. See advertisement.

P. A. OF A.—Mr. J. CARBUTT has presented each member of the P. A. of A. with a copy of the membership group, taken at Chicago, upon one of his gelatino-bromide plates. Artotype print by Harroun & Bierstadt, New York. It is a pleasant souvenir of a pleasant gathering.

PICTURES RECEIVED.—From Mr. W. J. BAKER, Buffalo, N. Y., an elegant collection of cabinet and panel pictures, in which every variety of subject is treated, from the gray-headed old clergyman, down to the lisping little miss of three summers. The posing in all is graceful and admirably adapted to each sitter; accessories tastefully chosen; lighting, chemical effect, and finishing, all that one could ask for. The whole set makes a show one could well feel pride in showing to their friends. Mr. BAKER is one of our best art photographers. From Mr. FRANK G. ABELL, Portland, Oregon, two very effective examples of "living statuary." Mr. M. L. DAGGETT, Taunton, Mass., sends us some more of his works of art, in the form of most exquisite photographs of silverware. The subjects are artistic in themselves, and the master-hand of the photographer has brought out every detail in the finest chemical effects we have ever seen. Several cabinet bust pictures, from Mr. A. M. ALLEN, Pottsville, Pa. Good, clean, soft work, and finely finished. From Mr. E. P. LIBBY, Keokuk, Iowa, some excellent cabinet photographs, fine in every way, especially in judicious retouching. Mr. P. F. EDGORTH sends us two pictures of the late Photographic Association Convention, one 7x9, the other 11x16. We recognize many familiar faces in the picture, which brings back to us the Convention, which we sat facing during the whole of its session. The prints form a fit companion to the reports which we have just concluded in our last number. Mr. J. W. BLACK, Boston, Mass., sends two 9x16 prints of the regatta of Hull. The vessels in one view were under full sail and running before a stiff breeze. The negatives were made with a VOIGTLANDER Eurycope lens No. 5, stopped down one-half, exposure one-third second. The pictures are clear, sharp, and full of detail, and it is marvellous how they were ever secured. Over fifty vessels under full sail are in one of them. They are the champion Maine photographs. From Messrs. RANKIN & GRINNELL, Taunton, Mass., a very pretty cabinet vignette of a sweet-looking little miss. From Messrs. HARROUN & BIERSTADT, New York, a very tasteful circular, ornamented on the covers with artotype pictures of various subjects, also a very fine 8½x11 artotype view of the landing of the great Egyptian Obelisk at New York. These gentlemen are now publishing a series of artotype views of the obelisk, eight in all, showing the progress of the great monolith from the disembarkment, at Staten Island, to its final place of erection in Central Park. Price fifty cents per copy, for single views. Mr. W. H. PARTRIDGE,

Boston, sends us a most novel design for printing a child's picture. The print before us is a cabinet, representing a large envelope torn in the centre, and through the opening, surrounded by the jagged edges of the paper, appears the head and face of a beautiful little girl. In one corner of the envelope is a postmark with the motto, "Many Happy Returns."

WE have before us a copy of the *Temple of Photographic Art*, published by Mr. WILLIAM M. LOCKWOOD, Ripon, Wis. It is a four-page paper, opening with an address, "To Our Patrons," in which the relative positions of the photographer and the sitter are dwelt upon in a very sensible manner. The remainder of the paper is filled with very readable matter—verses, spicy sketches from real life, bits of photographic information, etc., and closes with a list of views of the country about Ripon, made and published by Mr. LOCKWOOD.

MR. F. GUTENKUNST has presented us with an excellent phototype of Dr. W. S. PLUMER. In our estimation, this admirable picture is the best sample of phototype we have seen from this or any other country.

MR. J. PITCHER SPOONER, Stockton, Cal., tells us he has received *all* the premiums awarded to photography at the County Fair, lately held in his place. We congratulate him.

MR. CHAS. AIKEN, Evanston, Ills., receives a complimentary notice in the Evanston *Index*, upon the opening of his photographic studio, which he has just built for the more convenient carrying on of his business.

THE October price-list of Messrs. CHARLES COOPER & Co. is duly to hand, full, as usual, of every variety of first-class chemicals, quoted at reasonable market prices.

MOsaICS, 1881.—The season has again come around when we would invite our friends, who wish to do good by giving their own practical knowledge to the fraternity, to contribute a short article to our little year-book, *Mosaics*. To such, we make our usual offer of a bound copy of the book, in return for their kindness in helping fill its pages. We would like to have all articles in hand by November 10th at latest.

OUR HOPES AND AIMS FOR 1881.—We are preparing some grand features for our magazine for 1881, which, we believe, will prove of great service and use to all our subscribers, all of whom we hope thus to retain for the whole of the new year.



LOESCHER & PETSOH,

BERLIN, PRUSSIA.

“A FICKLE SHADOW.”

T H E

Philadelphia Photographer.

Vol. XVII.

DECEMBER, 1880.

No. 204.

Entered according to Act of Congress, in the year 1880,

By EDWARD L. WILSON,

In the office of the Librarian of Congress, at Washington, D. C.

REMOVAL OF OUR OFFICE.

WE beg leave to announce the removal of the office of the *Philadelphia Photographer* from No. 116 North Seventh Street to more convenient and commodious quarters at Nos. 912 and 914 Chestnut Street, second floor, where we are now comfortably fixed, and where we shall be glad to see our friends—old and new.

Besides handsome offices, we have a large store-room fronting on Chestnut Street, and further back are our various rooms devoted to such photography as we need to do for the production of the pictures for our magazine and books, and for the manufacture of lantern-slides, in which we are engaged.

Please refer to our advertisements, our prospectus, and our cover, and bear in mind always that—

Our address is changed to
912 and 914
Chestnut Street.

WHAT ABOUT 1881?

PATRONS! The publisher of this magazine begs to put aside the editorial garb for a brief time, and ask you what he may hope for *from you* during the eighteenth year of his life as your literary caterer?

We have already looked ahead for you, and made preparations for some new fea-

tures which, we believe, will be of great advantage to you. Large means will be needed to carry out our plans entirely.

We *cannot afford to lose one subscriber*; and we need that the renewals should be promptly made, that we may know just how far to go on and complete the contracts we have proposed.

If you *want* our magazine, then—if you are willing to receive it for 1881 (our eighteenth year)—won't you please apprise us *now*? There are various reasons why you should do this:

1. To enable us to make our contracts with our co-workers, which must be for a year ahead.

2. To take advantage of the market in buying supplies, and in contracting for paper, printing, and wood-engraving ahead.

3. To enable us to know what edition to print ahead, so as not to have to say to those who are slow in renewing: "We cannot supply you the early numbers of the volume, as we did not know you would call for them, and we did not print enough for you."

These "*matters of business*" we dislike much to bring before you. We always had an inbred *hatred* for business. Our literary work we love, and put our heart and soul into it. Would that somebody else would attend to the business department. But as our support does not warrant a liv-

ing, even for one who is growing old in the service, we are compelled to step down and ask the above favor.

You are acquainted with us. You know that our spirit is on the side of all that pertains to your welfare. We cannot go on without you. We want to be necessary to you. The thing is mutual. Let us, please, have your \$5 *now* for 1881, and, when you can, send an additional subscription with your own. You shall share the advantages. *Trust us.*

Our effort during 1881 shall be to make our magazine more than ever *educational*, but never forgetting our duty to *defend* you against wrong-doers. Our *pictures* will represent the works of our best home and foreign talent. We shall sometimes give as many as twelve photo-studies in one issue, beginning with that number from Mr. Henry Rocher's Chicago studio. Engravings of positions will also be given *every month*, and lessons on all the departments of photo-work. We shall provide well for you, if you will encourage us so to do. We need every one of you now. Please look over the order-sheet, and fill it up liberally. It will all come back to you.

Happy New Year! One and all!

1881—MOSAICS—1881.

THE seventeenth edition or issue of *Photographic Mosaics* is ready for the anxious buyer. The advertisement concerning it gives a list of the able articles which it contains, and all we ought to do is simply to refer you to the array of splendid subjects which our good friends, the contributors, have enabled us to put together for you—so much good in such compact shape.

Please refer to this list, and then do not forget to add an order for a copy to your order-sheet for 1881, which you are going to send us *this week*.

It will be seen that almost every subject connected with photography is represented in these articles—all practical and useful. One important feature, too, is the number of articles which come from the successful men of our business, giving practical hints *on the way to succeed*. These hints are very valuable to every one in our art.

We have expended more than usual on the illustrations this year, as some of the contributions could not have justice without them. In every way, we have tried to make *Photographic Mosaics*, 1881, *excel* any of its predecessors, and we believe we have succeeded.

One of our large buyers in New York sends us the following :

"No. 1 CHAMBERS STREET, NEW YORK,
"November 10th, 1880.

"MR. E. L. WILSON.

"DEAR SIR: I understand you are about to publish another edition of *Mosaics* for 1881, and fearing they might all be consumed by the many thousands of readers—who cannot 'keep house' without it—before all had been supplied, I write, urging you to publish enough this time, even if it be a million; thereby giving every one a chance to get the valuable information and instruction it contains.

"The last edition (1880) was far too small in number. It was exhausted long before its time, and many hundreds were obliged to 'starve without it.'

"Many of my customers have sent the money for it, and I could do no better than to return it as it came. They say: 'Why don't he print enough for us all?'

"Now, please do not let that question be heard again. Let us have a million this year.

Yours truly,

"ANDREW H. BALDWIN."

We have endeavored, this time, to *print enough*. Last year, we printed largely in excess of the year before, and the supply was exhausted in less than sixty days. We further and largely increase the edition this year, and hope both to have enough and not to have any left unsold on our hands.

Within a month, we have bought back copies of the 1880 *Mosaics*, to supply the orders which continue to come for it.

A few copies of some of those for past years can be had, but no complete sets.

SUBSCRIBE for 1881 *now*. Our magazine is only \$5.00 a year, and it will help you *hundreds* of dollars *sure!*

HOW GOOD PHOTOGRAPHERS WORK.

BY THEMSELVES.

(Continued from page 321.)

FROM S. L. PLATT, MARENGO, ILLS.

IN reply to your list of inquiries, I must say there is nothing more interesting to an artist than to see how "they all do it." It will be impossible for me to confine myself to the text, for what I know of photography is free to all; when any artist asks me a question concerning photography, I always give him a fair, square answer, for the purpose of advancing the art.

So we will begin with the negative glass where Saint Victor left off, in 1845. We will suppose he left it containing an image; so we will proceed to clean off the film by placing it in a solution of concentrated lye for a few days, then wash well, and place in a solution of nitric acid and water for a couple of days, then wash well and albuminize.

Water,	16 ounces.
Albumen,	1 ounce.
Ammonia,	6 drops.
Iodide of Potassium,	4 grains.

Now when the glass is dry we want a collodion :

Alcohol,	6½ ounces.
Ether,	5½ "
Cotton,	120 grains.

This constitutes plain collodion, which we will proceed to sensitize :

Plain Collodion,	6 ounces.
Bromide of Cadmium,	12 grains.
Iodide of Ammonium,	42 "

Now we will proceed further and answer a few questions.

Not being able to get distilled water at all times, I am compelled to use cistern, or soft water, by keeping a large stock-solution sitting in the sun, containing a few ounces of silver. This I find very convenient, as it is always ready for both negative and printing baths. In making a negative bath, I use any quantity, and add silver until fifty grains strong; then pour out one-half the amount and add iodide of potassium, and filter. I then take a new filter and filter the remainder, and add a few drops of nitric acid.

To rectify an old bath, I neutralize with ammonia, and sun until clear, then add a few ounces of stock-solution, and silver until fifty grains strong, and acidify with muriatic acid; this will throw down a white precipitate; stir with a glass rod, let settle, and filter for use.

We now want a developer: so we will make a stock-solution of protosulphate of iron, fifty grains strong, by placing a sack containing the iron suspended in a jar; when the iron dissolves it will settle to the bottom, forming a saturated solution. If it were only thrown in the water it would form a saturated solution at the bottom, while the balance would not dissolve. Now filter out eight ounces, add water until thirty-five grains strong, and acetic acid, one ounce. I find that developer works best, if warmed a little, for both winter and summer use.

Now we have the negative, so we will fix it in a strong solution of hypo. Wash and flow with gum-arabic; when dry, apply a little dry color before varnishing.

Varnish.

Gum Sandarac,	1 ounce.
Chloroform,	¼ "
Oil of Lavender,	½ "
Alcohol,	7 ounces.

Next comes the printing bath; so we will take an old negative bath and see what we can do with it. I guess it will print; so we will add silver or water until forty grains strong, then neutralize with ammonia, and sun until clear; then to every eight ounces of bath add citric acid dissolved in one drachm of pure water; shake well, let settle, and filter. Then to every pint add one drachm of muriatic acid; shake well, then add ammonia until slightly alkaline; filter, and it is ready for use. If the paper is too dry to silver properly, steam a trifle before using.

Should you prefer a new bath, go back to the stock-solution of silver and water. Take eight ounces, add silver and water until forty grains strong, and one ounce of saturated solution of alcohol and camphor. Should the paper have an oily appearance, add a little more stock-solution. Silver from one minute to a minute and a half after the paper is dry. Fume from fifteen to twenty minutes.

When the bath becomes charged with al-

bumen, place it in a shallow dish, and add a quantity of alcohol and set fire to it; the alcohol will all burn out, and leave the albumen so it can be removed by filtering.

To keep paper from turning yellow, I fume it and roll up snug, and put in a cool, dark place; being alone, I always silver paper the night before; when dry, fume, cut, and roll up; if the sun fails to shine, let it remain so a day or two; the edges and the outside sheet only will be yellow. As soon as the printing is done, trim the prints and roll up as before, until you have time for washing; this I usually do in the evening. In washing I use soft water until after the prints are fixed.

As we have them well washed, we will proceed to tone.

Gold Solution.

Chloride of Gold, . . . 15 grains.
Water, 6 ounces.

Soda Solution.

Sal Soda, 1 ounce.
Water, 6 ounces.

Toning Bath.

Soft Water, 1 quart.
Gold Solution, 1 drachm.
Soda Solution, 8 drops.

This toning bath can be used several times by adding the gold and soda solutions. It tones best while warm. In winter, warm the last wash-water before toning. As fast as the prints are toned place them in a tray of water to await the fixer.

I always use my soda solution of medium strength, and add a little blue aniline (make a solution of aniline, one-eighth of an ounce, water, two ounces); add six or eight drops to fixing solution to produce pure whites. To get a moonlight effect, immerse the prints in alum water; if too blue, immerse in borax water. After fixing, place in a solution of salt water, after which change from one dish to the other; let stand a couple of hours, then take out on a glass and press the water out, and mount; when partly dry, stick up under a weight and let dry; then tint, and touch out spots with a crayon (H. B.), then lubricate:

White Wax, 1 ounce.
Paraffine, $\frac{1}{4}$ "
Camphor, $\frac{1}{4}$ "
Hard Soap, $\frac{1}{4}$ "

Melt together. Then use

Above Solution, . . . 20 grains.
Chloroform, $\frac{1}{4}$ ounce.
Alcohol, 3 ounces.
Bergamot, 15 drops.

Rub over with a flannel pad, then, after drying, rub off with a dry pad and burnish; use the burnisher rather hot.

I will not give my method of keeping cool or warm, as it is nearly the same as the method adopted by J. H. Scotford, described in your June number.

In regard to light. I am not in favor of screening a light unless the sun bothers. I get my different lightings by changing the sitter under the light, as any good light will work well for most subjects. By practice we can tell just where to place the sitter, and just how much to cut down the light in the camera, and just how long to expose the plate. It is very seldom I fail, though the length of my exposures is not alike; they range from two seconds, with an open stop, to thirty seconds with a closed stop, etc.

FROM J. H. LAMSON, PORTLAND, ME.

I WILL try and recollect your questions as nearly as I am able.

Collodion.

Alcohol and Ether, . . . equal parts.
Gun-Cotton, 5 or 6 grs. per oz.
Iodide of Ammonium, . . 4 grs. per oz.
Iodide of Cadmium, . . 1 gr. "
Bromide of Cadmium, . . $2\frac{1}{2}$ grs. "

I begin using when about ten days old.

Silver bath, forty grains; very slightly acid.

Developer.

Saturated Solution of Iron, . 2 ounces.
Acetic Acid, 2 "
Saturated Solution of Alum, . 20 "

My water for making negative baths I purify by adding half an ounce of nitrate of silver to a two-gallon bottleful, and placing in the sun until it settles clear.

We have so much water for washing prints that I hardly know how to advise as to washing in the least possible quantity; but I have a collection of my old West India photographic views, most of which look as fresh as ever, made over twelve years ago, in places where we had to buy our water by the gallon! These prints were washed in

very little water; we used to wash them in two rubber trays, changing them from one to the other three times at night and twice in the morning, before mounting! I have often wondered at their continuing to stand the test of time so remarkably well, without the least apparent change or fading, and could never account for it, as I know I wash my prints far more now, and they do not seem nearly so durable.

My business has always been good here, in Portland. Prices are fair, \$4.00 for cards, and \$1.00 additional for each extra position; cabinets, \$8.00 per dozen, \$5.00 per half dozen; we do about an equal number of each. We do a great deal of enlarging and copying, and make more money in that way than in any other branch.

I have one of the best studios in this county, and employ eight persons with myself. We do considerable school work, and some clubs. We ask part pay in advance.

FROM E. D. EVANS, CORNING, N. Y.

In reply to your inquiries in the June number of your journal.

1. I never use any distilled water, but I keep on hand, in very large bottles, water melted from clean ice, which is purified by throwing into it a few grains of silver, and sunning well. I consider this kind of water very pure, and always ready to use.

2. I do not find it necessary to cool my chemicals at all in my dark-room, as I have not known it to be warmer than ninety degrees in my present gallery; but in my old rooms, which I vacated about a year ago, I have seen the thermometer stand at 110 and 115 degrees many days, on account of a large bakery underneath; what with the heat coming up through the floor, and the heat of the sun on a west sky- and side-light pretty much all day, it was *terrible*; but even then I was not troubled with my chemicals being too warm; of course, I had to be careful not to allow my plates to remain in the bath as long as I would in winter.

3. My bath I make about forty grains strong, using the purified ice-water, and I iodize it well with iodide of potassium by dissolving the iodide in a little water, and pour it into the bath; I then filter and acidify with nitric acid C. P. This coating a plate

with collodion, and letting it remain in the bath over night, is altogether too slow, as it would take eight or ten large plates to iodize a large bath sufficient to make it work well, and, in the meantime, if I have to use that bath after the first night, I will be obliged to make some poor negatives until the bath is well iodized, so I prefer putting it right in when I make the bath, as there is no danger of adding too much; the bath will take up so much, and *no more*.

Collodion.

Iodide of Ammonium, . . .	2½ grains.
Iodide of Cadmium, . . .	2½ "
Bromide of Cadmium, . . .	1½ "
Bromide of Potassa, . . .	1 "
Cotton, Anthony's Negative and Hance's Delicate Cream, equal parts,	6 "
Ether and Alcohol, equal parts,	1 ounce.

Developer.

Protosulphate of Iron, . . .	1 pound.
Water,	256 ounces.

To each sixteen ounces of this, after filtering, I add just enough of acetic acid to make it flow nicely, about an ounce and a half, sometimes less and sometimes more, according to how much alcohol there is in the bath.

4. I use my positive bath decidedly neutral, and about sixty grains strong; float the paper one minute, draw over a glass rod, blot it, and, as soon as dry, fume for ten minutes; keeps all right for one day, but will turn yellow the next. I can keep it white longer by using my bath slightly acid, but cannot get as good prints.

5. The way I used to wash my prints before I secured the use of the water-works, was to wash entirely by hand, changing them, one by one, from one large dish into another, at least a dozen times, and keep them moving for about three hours; now, as I have the use of the water-works, the tank fills and empties itself by means of a siphon.

6. My operating-room runs east and west; I usually place the sitter in the west end, well under the skylight, camera at the east end. My sky- and side-light is hung with white screens, but I pay more attention to the use of my head-screen.

FROM MR. W. B. GLINES, NORWALK,
CONN.

I WILL try to answer some of your questions, and will be *glad* if it should help some brother reader of your valuable journal

1. I do not use distilled water. I fill a bottle with melted ice, put in a few grains of silver, and sun it *well*.

2. My dark-room is so situated that it is not much affected by change of temperature. It is inside, and surrounded by rooms on all sides. I keep the floor sprinkled, and, when it is over 90° Fahr., I set the collodion in a pan of cold water. I do not tamper with the bath or collodion. I work about the same the year round, and with *very* uniform results. In winter my stovepipe runs through my dark-room, thereby keeping it about the right warmth.

3. Bath, forty grains to the ounce of solution, very slightly acid.

Collodion.

Alcohol and Ether, . . .	equal parts.
Iodide of Ammonium, . . .	5 grains.
Bromide of Cadmium, . . .	3 "
Anthony's Climax Cotton, . . .	5 or 6 "

Put the alcohol in a clean bottle, add the iodide of ammonium, and shake till dissolved; then add the bromide of cadmium, and shake till dissolved; then add the cotton, and shake well; then add the ether, and shake thoroughly. The cotton should be first washed in *pure* ice-water, one pint; liquid ammonia, ten or twelve drops. Then wash well in *pure* ice-water, then in alcohol. The ammonia destroys any acidity of the cotton; the alcohol removes all traces of the water. Spread it out to dry, and mix the solution. By that time the cotton is dry and ready for use. If you are compelled to use the collodion at any time before it is thoroughly ripe, add a little tincture of iodine until it turns a rich straw color.

Developer.

Stock,	1 ounce.
Double Iron and Ammonia,	5 ounces.
Water.	

For Use.

Stock,	14 ounces.
Water,	32 "
Acetic Acid,	3 "

I *never* re-develop. Sometimes I in-

tensify with bichloride of mercury and water, but not often.

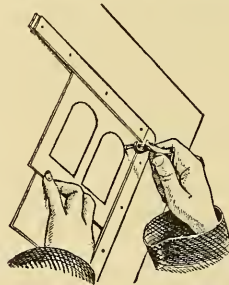
4. The *best* way to save paper is not to silver till you are *sure* of a bright day, then no more than you are certain of using. That is the only way I know of.

5. Have always had a *good* supply of water.

6. I use a top- and side-light. Top-light, two curtains; side-light, a *drop* curtain. I move all over the room in order to get the light I want. *Generally*, I sit my subject well under the light, with the curtain directly over him pulled back a *very* little, the *other* one pretty well back, and the *side* curtain half-way down. I use a large reflector, home-made; a piece of sheeting stretched on a frame, and hung like a mirror on a bureau. Two-thirds *broad* shadows.

HOW I USE THE ROBINSON TRIMMER FOR STEREOGRAPHS.

I AM delighted with the new trimmer, it works like a charm; could or would



not do without it for twice the cost. I have double guides for stereoscopic work (see the drawing), and on a board two feet by about twenty inches

I tack half of an old slate frame; put a piece of glass that fits up to the groove, by that I can hold the print solid and cut without any trouble. I can trim twelve dozen in one hour. By having the double guides, it saves all moving of the print or guides.

ANDREW PRICE.

HEALDSBURY, CAL.

THE *Philadelphia Photographer* is the *best* photographic magazine there is. It is educating and helpful; it protects and defends the trade; and its pictures alone are worth its cost—\$5.00 a year. It is your best friend. Subscribe early for 1881.

NOTES AND PRACTICAL SUGGESTIONS.

BY A. M. DE SILVA.

(Continued from page 354.)

In a recent number of the *Photographic News*, I read that Herr Husnik, of Prague, has taken out a patent for an improved transfer-paper for photo-lithography, the paper being first coated with gelatin, and, when dry, albumenized, and afterward sensitized. For the benefit of my readers, I would mention that transfer-paper, doubly coated, has been successfully used here since February, 1877. I copy from the notes in detail:

Paper for Photographic Transfers.—“Float insoluble albumenized paper on albumen, 20 ounces; saturated solution of bichromate of potash, 15 ounces, for ten to fifteen seconds.”

This was taken, I believe, from one of the English journals. Appended is: “Would not insoluble-gelatin paper be better?” Try it.

The gelatin was tried, and found to be a great improvement upon the preliminary coating of insoluble albumen, the soluble (unexposed) portions of the sensitive surface washing away more readily and cleanly. No secret has been made of it, and it has been worked commercially. The author, Mr. George Wilson, has kindly given me the following additional wrinkle, with permission to publish it:

“A first coating of *soluble* gelatin—forty grains to the ounce of water—was found superior to *insoluble*, owing to the difficulty of washing the ink from the paper, the non-adhesiveness to the stone, and the shrinkage of the transfers.”

In *Mosaics* I shall have something to say about enlargements, among other items within the capabilities of the ordinary photographer. But here I wish it distinctly understood that I do not intend the above item as puffing in any way or conniving at the financial achievement of the parties interested in this enlarging process. We have to draw the line somewhere, and process propagators must place themselves in a different light. There is all the difference in

the world between agreeing to *teach practically*, for a consideration, something of worth fairly represented, and to sell another thing either utterly worthless or misrepresented. “Time is money,” and to seek to discover, to work out, or to perfect anything, costs both time and money, and surely the “laborer is worthy of his hire.”

In a conversation once with a party who was well posted on the matter, I was assured that processes are more frequently purchased, not by those who wish to use them, but by those who wish to prevent their neighbors from competing with them, and that these were the very ones who cried the loudest. “Carbon” was praised and abused, and yet most beautiful results are obtained with it *in competent hands*; but any one could not do it, neither could it compete with small, low-priced silver prints. Collotyping was put forth, and no one could, in the face of the great improvement made in it, and the splendid pictures turned out daily by its means, rob it of its merits. But to be done well and to pay, it must be done as advocated by the editor of this journal, in establishments especially fitted for the work, where it is constantly being done by skilful hands whose special business it is, each one doing his particular part, until the picture is ready for presentation to the public. Another thing, we have held up our silver prints as a standard of excellence. This is a great mistake, for they are very far from being perfection. The posing is oftentimes wonderful, but *where* is the lighting? Will our chemicals bear us out? Certainly they do not *now*, although our chemical knowledge (upon which the great improvement in lighting mainly depends) will no doubt continually improve. But this must be met half-way by partly undoing what has been done already—we must improve and change the taste of the people as we advance ourselves.

I have to thank Messrs. Harroun & Bierstadt for the very courteous manner in which they received me, and the opportunities they gave me, not only of looking *into* the many beautiful specimens of their photographic printing, but of showing me the practical working of their establishment.

A Few Useful and Inexpensive Accessories.
—In nearly every photographic studio can be found an old background or two, no matter whether interior or exterior. Place them in a tub of water and wash off the greater part of the color, changing the water several times. Wring them out *with the hands*, which will give them an uneven and reticulated appearance, and after drying, you will have, at not very much trouble and scarcely any expense, a “floor-cloth” which will represent earth remarkably well, especially if it be laid not too smoothly on the floor of the studio. Improvements suggesting themselves can be made by sprinkling upon it from a watering-pot an infusion of logwood, commencing with a rather weak one.

At any lumber-mill the bark from cedar or pine trees can be purchased for a trifle; by nailing the pieces to the sides of an empty nail-cask, “stumps,” light and convenient to handle, can be readily made.

Artificial rocks are simple things enough to make if the forms—large pieces of coal or natural rock—are within reach. The stout paper used by builders is the best for this purpose, because of a smaller number of layers being required. The first layer should be thoroughly wetted so as to allow of its being pressed into the configurations of the model, followed by two succeeding layers wetted until they are pliable and well pasted with good stout flour paste. When dry they should be taken from the forms, a piece of wood cut to fit the bottom, having pieces nailed at right angles to support the top; afterward pasting *smaller pieces* of stout brown paper over the whole, the edges of the paper representing veins in the rock. The brown paper takes naturally without any painting; but if paint be employed, it should be oil color (sanded over at pleasure), in order to avoid damage to clothing when in use.

Unfortunately, plants do not thrive well in the atmosphere of the photographic studio; but the woods and banks will furnish the stems of creepers, to which dried natural leaves or artificial ones (which may be purchased cheaply enough from artificial-flower makers) can be readily attached, giving a far more natural appear-

ance than the *strings* of leaves generally used, and ferns and mullen and tufts of tall grass, and the larger and branching weeds. The ferns, although dead, with careful handling, and attaching a thin wire to some of the stems to support them, will last the winter through and until the summer comes again, when a fresh supply can be procured. The mullen, beautiful and lasting, will be found most useful to fill in and to break up lines. The tufts of grass and weeds can be cut off with but a small amount of earth attached, the roots being sewn up in a brown cotton covering to prevent dirt, and placed in any position, doing away with the everlasting, horrid grass-mats, which not infrequently, combined with other accessories, make the subject look as though one foot were in the garden of a palace while the other rested in a farm-yard.

The arbor-vitæ may be used successfully, the foliage remaining well on the branches when dry, and photographing nicely; and for winter scenes the branches and stems of the birch, and the branches of the maple, judiciously splashed with white (to represent snow) will be found both pretty and useful. And there are a thousand and one things to be found during a ramble in the outskirts of a city which can be pressed into the service: a *foreground* should be as natural as possible; no matter how skillfully it is painted on canvas, it is still paint and canvas in the photograph, and detracts from the effect of the fine landscape backgrounds which we now are enabled to procure.

PHOTOGRAPHY AND BIOGRAPHY AND THE PHOTO. COLLEGE.

BY C. D. MOSHER.

By the aid of photography, the poor as well as the rich have been permitted to look upon the likeness of almost everything that has life, and everything in Nature's garden in this beautiful world. Millions of miles beyond space, the camera has brought back to us true likenesses of the moon and planets, and enabled the skilled physician to trace the finest fibres and tissues in the human system that the eye cannot see (only when photographed under the microscope).

The myriads of little insects in a little drop of water, and the little gnat's eye are enlarged to look like a full moon. Only by the aid of photography could we have these likenesses, and by it we have them perfect; and by attending one of Professor Mapes's lantern exhibitions we can visit, as it were, the beautiful cities in Europe, Palestine, and the old world, and everywhere the art has been taught, will bring us back pictures true to life by the aid of the camera.

But this is not the greatest blessing it has given the human family; it has placed within the means of the humblest citizen an accurate and inexpensive likeness; in so doing it has aided in perpetuating the remembrance of those that have passed away to the other life, that we love and hold most dear. The poor as well as the rich have shared its blessings alike, and by it art-photography has triumphed over hand-painting, and placed a living likeness, perfect, with not so much as a single hair left out, in every household.

There never has been an invention that has given mankind so much pleasure and satisfaction as photography; and it has done more to educate the poor as well as the rich to a higher standard in art culture than all the other arts combined; and there is none so stingily paid for and little appreciated. And why is it? One of the causes, the hand-painters cry it down, and try to bring it into disrepute (when it is the very thing that gives them bread), and say to your patrons, "Your likeness is only a photograph, and don't require either art or skill to make." When, in fact, it requires more skill, and a finer art-educated brain and eye than any art portraiture does. A very large percentage of these very artists cannot paint a portrait without using the photograph or negative to draw their likeness from; even the celebrated Healy uses the photograph, and the better it is the closer he follows it; and only strives to improve it when there are defects. What photographer would not do the same if he had it to do over again? Then they have the cheek to say to their patrons, "I only used your photograph as a guide, so as not to trouble you to sit so often for me." When the truth is, it was the only way, with but few exceptions, that they

could paint anything that would look like a likeness, without the photograph to make the drawings from; and were it not for photography, to-day, a very large percentage of them would have to go out of the business or starve.

And there is still another cause. There are so many photographers (only in name) that make cheap, inferior work, in many cases not from their own will or choice, and would like to do better work than they now are doing, and would gladly avail themselves of attending a month's course of lectures, in summer and winter, in some photographic college, and graduate with honors, and receive their diplomas. This of itself would give tone, character, and a higher value to their photographs, and add at least fifty, and I think I can safely say one hundred, per cent. to the gross business of all the photographers throughout the country; and until we have photographic colleges in every large city in the United States, where we can give to our operators, printers, retouchers, and proprietors of photographic establishments, a photographic collegiate education, we cannot expect to have our art recognized by the public as one of the fine arts; whilst by having the college, we would give photography an upward march such as it never has had, and a higher estimation by the public of our profession.

And now, to return to my subject, there is another field open, hitherto untried—Historical Photography or Biography.

There are members of our family passing away daily, whose good deeds ought to live after them, leaving behind a history full of benefit in example, which is never preserved. They die, and beyond the mourning in their families and homes, and perhaps a brief obituary notice in the daily papers, they sink out of sight, and are remembered no more. Their features remain distinct in the minds of their family by the aid of photography. Their portraits are found in the albums of their acquaintances, but to strangers they are of no particular interest. Now, it would seem not only becoming, but advisable, to retain, together with their likenesses, a brief record of their works and life. How many noble deeds are forgotten merely because there is nothing to recall them; how

many noble lives lose their influence and immortality, merely for want of a medium through which to transmit it. In the busy, eventful life of the average American lady or gentleman, little time is given to the study of the good deeds of those who are no more. Is not this, in part, responsible for the low tone of our social and political life? should not the constant study of virtue make vice more detestable? Here then is the opportunity for photography and biography.

Let the album, then, be not only a mirror merely of man's face, but a record of his life; while the one reflects the features of his countenance, let the other exhibit the well-springs of his soul.

OBITUARY.

LEWIS E. WALKER.

WE announced in our last the death of our old friend and subscriber, Mr. L. E. Walker, at Washington, D. C., and beg to add what follows concerning his amiable and useful life.

Lewis E. Walker, for the past twenty-three years the Chief Photographer of the Treasury Department, died on Thursday, the twenty-first of October, at the age of fifty-seven, from disease superinduced by malaria. He was a native of Greenwich, Hampshire County, Mass.

In early youth he was attracted by the wonderful art of daguerreotyping, and he determined to make it his profession. By teaching school, for several years, during the winter months, he accumulated enough money to support him during the rest of the year, while pursuing his studies in chemistry. These finished, he devoted his whole time to his adopted profession, travelled over a large portion of the country, and rapidly gained fame from the excellence of his pictures. In 1856, when thirty-three years of age, he took charge of the ambrotyping in Mr. Brady's establishment in New York city, remaining with him about a year, and then going to Mr. Fredericks in the same capacity, where he stayed only a few months, the position of Government Photographer being offered to him, which he accepted and filled until his death.

He commenced his services in the Treasury Department when the facilities were crude and imperfect, but in the course of his long practice he perfected all the appliances for the rapid execution of his work.

He was the first to adapt the method of printing directly from a tracing on translucent cloth to practical uses, and he greatly enhanced the usefulness of his office thereby. It enabled him to copy the maps for the general movements of the army in the field during the war, and, since, the coast survey maps and the drawings from the Supervising Architect's office, without distorting the scale—a vital point in each case. His experiments covered the whole field of photography. He was a perfect chemist in knowledge of the chemical properties of the materials employed in his art.

In 1857 he had photographed on steel and zinc, and was testing the value of carbon as a photographic medium; but his shrinking from publicity and his disinclination to literary work, will prevent his share in the honor of having made photo-lithography and its kindred system possible ever being known, except to his friends of the profession, with whom he always conversed freely, and to whom he willingly gave the benefits of his experiments.

A man of the most gentle disposition, quiet in manner and unvarying in courtesy, but of firm convictions and immovable, once having determined his course, he died regretted by his acquaintances and lamented by his friends.

We also append the following:

TRIBUTE

To the memory of L. E. Walker, Photographer of the Treasury Department, who died October 21st, 1880, adopted by the friends in the office of the Supervising Architect, October 22d, 1880.

H. G. JACOBS,
Chief Clerk.

OFFICE SUPERVISING ARCHITECT, Oct. 22d, 1880.

IN MEMORIAM.

LEWIS EMORY WALKER was for nearly twenty-five years connected with the office of the Supervising Architect of the Treasury Department. We, his friends and associates in that office, desire to record an ex-

pression of our profound regret and sorrow at his decease.

His relations with the office were always of the most cordial and agreeable character, and those who have been most intimately associated with him, and have seen in his life the expression of his genial and kindly nature, bear willing and sad testimony to his many virtues. He was quiet and gentlemanly in his demeanor, of notable simplicity of character, and deservedly won our sincere respect and friendship. Rich in the esteem of his friends, he has passed peacefully away.

OUT-DOOR WORK MADE EASY FOR EVERYBODY.

(Continued from page 348.)

WE left this subject last month with the would-be out-door worker, fully accoutred with apparatus, his holders charged with sensitive emulsion plates, ready for a tramp into the land of landscape beauties.

We now want to speak as to the choice of plates.

By reference to our advertising columns, it will be seen that the leading manufacturers are Messrs. Newton (Scovill Manufacturing Company trade agents) of New York, Carbutt of Philadelphia, and Cramer & Norden of St. Louis, all of whom make an excellent article, reliable and satisfactory to any careful worker.

A good deal could be said right here about the difference in development of these plates from those made by the wet process; but, first, it is not within the scope of these present papers to do so; second, the ground has been gone over pretty thoroughly already in these pages; third, manufacturers do not themselves agree, as yet, as to which is "the best" method, since new features are being constantly discovered; and, fourth, from each maker whose plates you are pleased to try, you may obtain a full circular of instructions, which would require more of our space to give than we would be now warranted in taking from the many who will not interest themselves in the present subject. The development is the hard part, and must be carefully treated. We would

advise that the beginner with emulsion plates try a small stock of each of the kinds we have named, and, after careful experiment, use such as in his hands produce the best results. We need not go out into the field with you, either. You are all ready to go. You know how to select a view; if you don't, nothing can teach you better than a few trials intermixed with mistakes. You know how to walk around a subject, and to choose the time to photograph it—when it is the best lighted. You know, too, that choice picturesque "bits" reward you with greater pleasure for your pains than vast expenses do; and, at the same time, photography will thank you for not expecting too much of it; though, bless it! *it is* like a willing horse—always ready to *try* to do whatever you ask of it. It often fails when the subject is too expansive.

Mr. Robinson's *Pictorial Effect in Photography*, just republished in this country (see advertisement), should be consulted largely now, and even taken along with you, that you may study it over while you are "waiting for clouds to pass over," or "the light to come right" for you. It will help you immensely; and it has been issued with a paper cover so cheaply that you can afford to keep one clean copy at home, and another out in the field, or in your box of traps.

Now you have everything, *Go*, and try your hand.

It will be a great pleasure to you; it will do your health good; it will put money in your pocket; it will increase your reputation.

As to working emulsion plates, we are convinced that it is high time you try them. We gave you an example of our personal efforts in this line in our last issue. Go and excel us, and send the negatives to us for the magazine.

In these shortening days, when the light is weak, business before the holidays pushing, to have the power of working quickly in your hands, such as these plates give you, is a good thing; no silver-bath, no collodion, no failures from want of exposure, no loss of children's pictures, no moving of groups—well, there! we have forgotten our field of operations, and gotten into portraiture; but

there, too, these plates are useful. We shall, probably, have more to say of their use in the studio after we have made further trials with them.

ABOUT THE P. A. OF A.



I SEE the question now is, "Will the Executive Committee be justified in changing the place of holding the next Convention from New York city to either Saratoga or Asbury Park?" I think they should be so instructed by every member of the Association. Would it not be a good idea to request each member, through the journals, to advise the Executive Committee which place they prefer? I know the Committee will do what in their judgment they think best for the Association; but it would be some relief to them to know what the majority of the members think of it. I think there are some very serious objections against holding it in New York city. The first is, there are so many outside attractions in large cities that the members could not be kept together during the regular sessions, and a few would attend to all the business, while the majority would be out sight-seeing. Not that there is so much that a few could not attend to it, but the more there are in attendance the greater interest there will be taken, and the more interesting and profitable it will be for all. Another is, the expenses would be so heavy that we could not reasonably expect to leave there out of debt.

I appreciate the generous offer of Mr. Carvalho of his gallery to hold the Convention in free of charge. But, should the Committee accept it, they could not reasonably expect much help from the other photographers of the city. My motto is, "The greatest good to the greatest number," and I think that can be accomplished by hold-

ing our next Convention in some small place, where we can secure sufficient accommodation on more reasonable terms. If the Committee say, "Go to New York city," I will go; but I would prefer to attend the Convention at Saratoga or Asbury Park first, and go to New York city afterward.

Yours truly,

J. A. W. PITMAN.

SPRINGFIELD, ILLS., November 9th, 1880.

MUCH is being said and written about the Photographers' Association of America. I am a member of it; and if it had not been for an accident I would have been at Chicago, and would have voted against New York city. Why not more central than clear to one side of the Union? Why not a smaller place, where it will be less expensive? I, for one, am opposed to New York.

J. H. REUVERS.

PELLA, IOWA, November 10th, 1880.

YOUR DUTY.

BY GAYTON A. DOUGLASS.

"I hold every man a debtor to his profession from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereunto."—LORD BACON.

WE wish that every photographer would weigh well the words of the Lord Chancellor we have quoted, and act upon the wise advice. It is appropriate at this time, as we are earnestly striving to build up an Association having for its object the advancement of the art-science of photography, and the elevating and educating of those who have adopted the profession. It is the *duty* of every one who is worshipping at the shrine of the god Helios to pay tribute. We are not asking you to undertake any great task, or to bear any heavy burden; our desire is simply your co-operation in associated effort, and the enrolment of your name among the members of the Association. You surely cannot deny it on the score of expense, for the amount is so trifling that it should not for a moment be considered. The advantages offered are beyond price, if the objects of the Association are matured and carried out; and they certainly will be if the fra-

ternity respond as they should. Being a debtor to your profession, you cannot be a greater help and ornament thereunto than by assisting in the glorious work of education; in the elevation of the professional character of your fellow-craftsmen; in the promotion of friendly intercourse and feeling; all this, and more, can be done by associated effort, and to this end we ask you to come and be one among us.

In this age of progress you cannot be a drone in the hive, but you must be one of the workers. Do not stand back and growl at everything that is done, or refuse your countenance to the Society because you think it should be carried on in a different manner, but interest yourself in the work, and if you think your plan is best urge its adoption. Do not say, when asked to show a little sympathy for our cause, "I don't want anything to do with it; don't like its officers." That is not professional or manly; all you have to do is to come right in, and do your level best to elect those who are satisfactory to you, and whom you think you can trust. What we want is, every photographer to realize that he owes something to the profession; and to pay that debt by taking hold with a will, and helping to make the Photographers' Association of America one of the greatest educational and beneficial powers that exist. Reflect, "every man a debtor to his profession." Act "so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereunto."

AN ESSAY ON THE EDUCATION OF THE EYE

WITH REFERENCE TO PAINTING.

BY JOHN BURNET, F.R.S.

(Continued from page 333.)

STUDYING FROM NATURE—*Continued.*

THE art of studying from nature may be therefore considered as implying that which we perceive through the medium of our own eyes, and those things made apparent through the spectacles of other men; for seeing nature does not merely mean seeing the exact length and breadth of any object, but means the power of discerning her beauties and defects,

those portions which are to be preserved, and the mode of heightening their effect upon the eye of the spectator, and these several parts which operate detrimentally to the general arrangement of the whole, which are to be intercepted by other objects, or left out entirely.* For, as the accidental combinations of nature are thrown together uncontrolled by the likings or dislikings of any one, the greatest study is necessary, so as to form a complete work, which shall possess all the appearance of chance, combined with the most skilful adjustment; for example, what a variety of appearances do not the effects of light and shade produce upon the same scene, viewed at various times of the day, or seen under the advantages or disadvantages of accidental arrangements of objects; this power of discernment

* Nothing can be so unphilosophical as a supposition that we can form any idea of beauty or excellence out of or beyond nature, which is and must be the fountain-head from whence all our ideas must be derived. This being acknowledged, it must follow, of course, that all the rules which this theory, or any other teaches, can be no more than teaching the art of *seeing* nature. The rules of art are formed on the various works of those who have studied nature most successfully; by this advantage, of observing the various manners in which various minds have contemplated her works, the artist enlarges his own views, and is taught to look for and see what otherwise would have escaped his observation. It is to be remarked, that there are two modes of imitating nature; one of which refers for its truth to the sensations of the mind, and the other to the eye.

Some schools, such as the Roman and Florentine, appear to have addressed themselves principally to the mind; others solely to the eye, such as the Venetian, in the instances of Paul Veronese and Tintoret; others, again, have endeavored to unite both, by joining the elegance and grace of ornament with the strength and vigor of design; such are the schools of Bologna and Parma. All these schools are equally to be considered as followers of nature. He who produces a work analogous to the mind or imagination of man, is as natural a painter as he whose works are calculated to delight the eye; the works of Michael Angelo, or Julio Romano, in this sense, may be said to be as natural as those of the Dutch painters.—*Reynolds's Notes upon Fresco's Art of Painting.*

is, therefore, to be acquired by the study of the works of those who have excelled in the different departments of the art, and afterwards perfected in searching out and con-

has watched a more favorable arrangement, and who has followed up and completed the various hints derived from accidental combinations, as in Figs. 52 and 53.

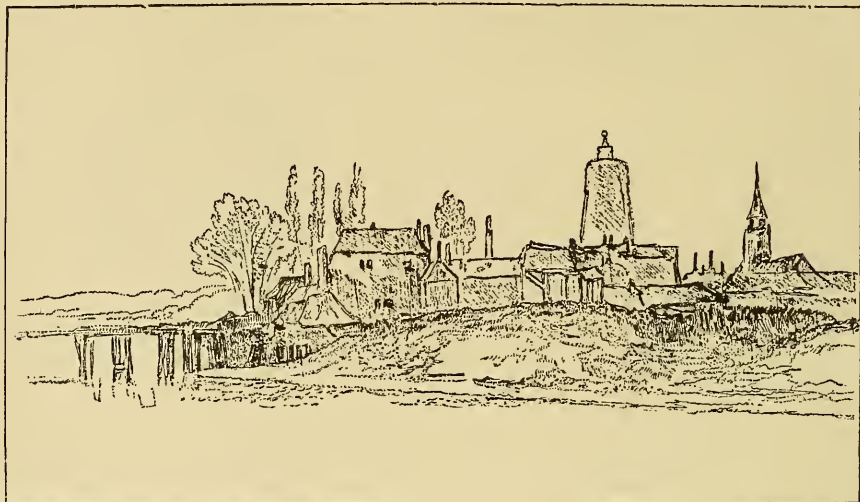


FIG. 52.

templating the beautiful combinations which lie scattered in the endless varieties of nature: this mode of study alone can enable one artist to surpass another in the power of

Thus the study of nature is conducive to perfect the education of the eye, by careful investigation of her works ourselves, and by being able to comprehend and appreciate

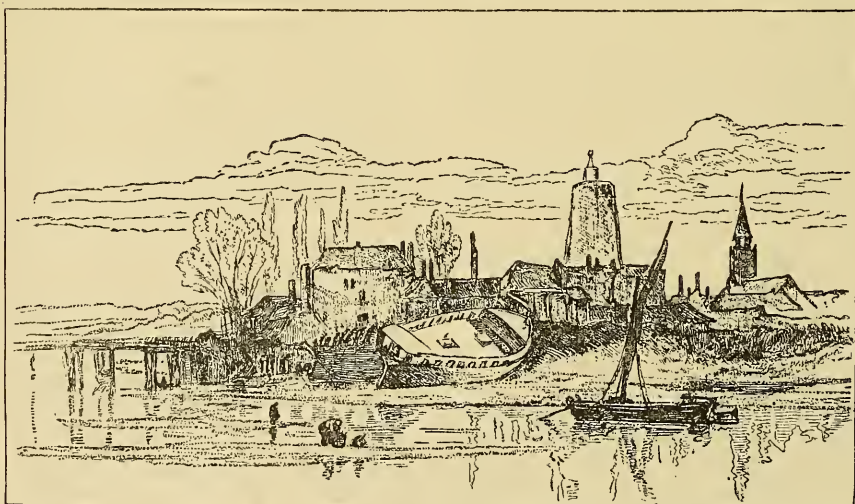


FIG. 53.

selection; and the same scene, bald and ineffective in the hands of one, may be rendered full and of rich effect by another, who

the works of those who have most successfully studied her; and this not in a lukewarm or superficial manner, but with that

noble enthusiasm which stimulated the genius of Michael Angelo through a long life, and even, when deprived of the power of vision from old age, made him order his attendants to convey him to the gardens of the Medici, that he might feel and pass over with his hands the glorious remains of Grecian art, on whose statues he had founded his own education.

(Conclusion.)

VOICES FROM THE CRAFT.

MORE STUDIES TO STUDY.

SOME photographers seem to be born so naturally, whilst others have to be educated. Some are full of originality, as it regards position, etc.; others have to be instructed in such matters. We cannot all be masters in the art; and, therefore, some of us have to be pupils, and learn of the masters.

Some years ago, you embellished a number of the *Philadelphia Photographer* with "Studies in Position," from a Berlin photographer, and copied by Mr. Rhoads, which, I think, was of great use to those of us who have to learn position from the masters.

Now, I am aware you get a great many photographs from artists all over the world—good, bad, and indifferent—and I have thought that you might get up a series of cards, such as the one mentioned, which would not only be to your own advantage, but be of great use to a large number of artists who need models in position, etc., to copy after. The card I speak of contained twenty-five models, and many of them are such as are needed in every day's work.

Now, suppose you were to get up some four, six, or more such cards, of various positions, of all ages of subjects, and sell the set for so much; don't you think you would thereby be an educator to a great many who need just education, and, at the same time, be remunerated yourself for the labor? I really think such would be the case.

In presenting a series of models, I would not aim so much after *extravagance* in position as after gracefulness and ease, with a view to the best effect for correct portraiture.

Yours truly,

A. M. C.

[We have had a project under way for

some time, which, if we can work it up, will, we think, meet our correspondent's excellent suggestion.—ED.]

FROM AN OLD N. P. A-ER.

YOUR postal, reminding me that I was not forgotten, and that *Mosaics* for 1881 had a place for me, came duly to hand.

About that time, I had occasion to step into the post-office. The first thing that attracted my eye was a gent who had apparently just received a package of cabinet photographs, which he was looking at, while himself and several others were having a discussion over them. I did not have one in my hand; but I got a look at one as it was being looked at, and in that glance I saw that it was a copy of a daguerreotype, and that all the buff marks showed very distinctly. Upon the instant, I said to myself, "Here is a theme for the *Mosaics*." Hence the inclosed paper.

Many will be ready to exclaim: "That is a worn-out subject!" Well, let them. When one has such a tangible proof that every photographer does not know how to copy daguerreotypes, as I had in this case, I am of the opinion that one more "sound upon that string" will do no harm.

It is perfectly wonderful, the poor work I see as I travel about the country. I wrote you from Richmond about it. Since then I have been in Norfolk, Portsmouth, Suffolk, Petersburg, Lynchburg, and Charlottesville, besides numerous other towns of smaller pretensions; and I must say that I am utterly surprised at the number of poor, miserable attempts at photography.

I put the question to the proprietors, "Do you read the journals?" I am often looked at with staring eyes, and the response, "What journals?" Rarely do I find one who has ever seen one.

One of the neatest and decidedly most artistic galleries that I have found was in Salem, Va. The owner was busy when I went in, and I failed to find him after that. Everything was neat and clean, with some good work neatly displayed. I did not learn his name. At this place are two, one of whom I have called on. He has read some heretofore, I am sure; for, as soon as he saw my name, he knew who I was. He is a very

clever, hard-working gentleman, and is doing better work with his miserable apparatus than one would suppose possible. I loaned him the *Philadelphia Photographer* sent me from home, containing your report of the proceedings at Chicago by the Photographers' Association of America. I have great hopes of his sending on to you his subscription for it. I urged him to do so for his own good. By the way, he soiled my copy muchly. Keep an extra one for me, as I do not want to lose it.

You may be sure that I talk up the *Philadelphia Photographer* everywhere I go. I also advise every one to buy the *Mosaics*.

This long fight that you have had with a certain class of photographers and the photographic journals seems to have been won by you, as I always predicted; for I knew from the beginning that you were right. It must be very gratifying to you to come out with such flying colors.

Your journal has done more for the photographers of this country than any other enterprise of any character or kind that has attempted anything in that way. Go on in the good work. If I am not of the craft, I am watching their work, and am deeply interested in anything meritorious that is developed upon the subject.

I read your report with deep interest. I felt as if I had lost something in not having been there. I will, if living, and nothing happens, be on hand at the next one. As Ryder said, so have I often said—the Cleveland meeting of the National Photographic Association was one followed by great results, and one that I have always looked back to with the greatest pleasure.

I greatly rejoice in the success of the meeting just held by the Photographers' Association of America. It looks like the first of a series of many others to follow, from which the art of photographing is to receive great and lasting benefits. Push on the good work, say I.

You no doubt remember my prediction at the Philadelphia meeting in 1876, referring to the future, when the wet plate would be a thing of the past; and you, no doubt, have not forgotten the miserable attempt Lambert made to ridicule the idea. I was not quoted exactly right in your copy of

that prediction; for I said the time was not far distant when the dark-room for wet-plate work would become obsolete—when we would not see so many dirty stains of dripping silver upon the floor of the operating-room, and upon the fingers and clothing of the operator; but that, instead, the bath-dish would be set one side, while one little flowing bottle, containing all that was needed to sensitize a plate, would be used instead. All that is required to accomplish this is for some man of genius to turn his attention in that direction, and it would be accomplished.

Dr. Vogel was sitting just on my right, and, turning towards him, I said: "Here sits a man competent for this; and who knows but he is the very man to help us out in this matter." I did not say, "Here is the man to do it." And yet, if I had, I would not have been far out of the way; for I see in the last *Philadelphia Photographer*, page 285, that Dr. Eder speaks very highly of Dr. Vogel's emulsion. It was emulsion that I had on my mind when I made that talk.

I ought to say something about "Our Picture" in this letter; but, having spun it out pretty long, I will simply say it is one of the best in chemical effect that I have seen for a long time. Taken all in all, the September, 1880, issue is a grand affair.

Hoping you may increase in subscribers by the "M," I remain, full of pity for Lambert's victims and full of congratulations over your success,

Yours as ever,

I. B. WEBSTER.

DANVILLE, VA., October 3d, 1880.

ON AN INSURANCE BAND.

NOTICE, in your September number of the *Philadelphia Photographer*, that during the session of the Photographers' Association of America, at Chicago, a motion was offered by a Mr. Mosher to organize a photographers' protective life insurance company, which should require each member to pay the sum of five dollars, and to receive one thousand dollars in case of death.

The idea struck a key-note in my soul. I have for years thought such a society ought to exist, on a good, sound basis. I

and my husband are among the oldest photographers in the State, having worked at the business for over twenty-five years. Have painted portraits in oil, in crayon, and India-ink; have operated among the chemicals in the operating-room. We have both worked hard all these years, and are not rich yet, and are not growing any younger by virtue of said service; and I have never known but very few of the craft who could by any kind of prudence lay by a competence, especially if they were raising a family.

Now, I hope you will bear with me for writing this, to urge you to push this matter through, as you have it so much in your power to do, through the medium of the journal you so ably edit.

My husband is now operating in Alabama. He stopped in Chicago, on his way home, to attend the Convention, but was not able, on account of feeling ill, to remain till its close. He subscribed himself a member thereof; and if the insurance organization is effected, we can both be counted in as members, for I hope the Constitution of the society would admit women, for there are very many of them who are working hard in the calling to make an honest living. And I can safely say that three of our local photographers here will also subscribe. The enterprise is a laudable one, and the only wonder is that such a one has not existed long ago.

I hope to see some favorable response to Mr. Mosher's motion in your next issue.

MRS. R. GEER.

GREENVILLE, MICH.

OUR PICTORIAL PROJECTS FOR 1881.

We shall make very great efforts next year to supply pictures to our patrons of unusual value as studies in lighting, pose, and choice and treatment of the subject, and shall step out of the usual line to do it.

Early in the year, two of the loveliest gems of the Chicago Exhibition will be given in our issue, from negatives by President J. F. Ryder, of Cleveland—lovely pictures of young ladies, and fine studies throughout.

Following will be *twelve* studies, copied

from boudoir photographs selected for our purpose from his best work, by Mr. Henry Rocher, Chicago, Ill. These alone, if bought full size at Mr. Rocher's studio, would cost more than one year's subscription to our magazine. Similar sets of selections by eminent photographers at home and abroad will be given during the year.

A fine example of landscape work will appear early in the spring, from negatives by Mr. Wm. Lawrence, Dublin, Ireland—gems of their kind. We are also printing, for an early issue, a reproduction from another fine oil painting by Mr. Anton Seitz, Munich, Bavaria—a companion to his *Village Photographer* which appeared last year.

Other novelties are in preparation, which will be duly announced. Upon the whole, the pictures for the year 1881 will excel those of any volume preceding it.

AN ENTIRELY NEW FEATURE.

From the many pictures which are sent us each month, we shall select the one which seems most suggestive to us, have it engraved in outline, like the one below, and



LUMIERE—LYONS.

place it upon our cover as a study in position, with the name of the photographer producing it. Thus we supply a good study to *all* of our readers, and do honor to those who produce the best work. As there will be competition for this position on our cover

each month, we suggest that you send us your best. Our choice shall not be known until it appears, and there will positively be no favoritism. With our usual (and our *unusual*) amount of helpful reading matter, we believe our magazine next year will *well* pay every one who takes it.

PROMPT PAY.

Heretofore we have been able to induce prompt pay in advance by offering premiums in cash and books. This was done because of the hardness of the times. We were willing to make ours largely "a labor of love" for a couple of years, until photographers were doing better. Now *they* are more prosperous, we return to what we think our magazine is fully and honestly worth, namely, *five dollars a year in advance*.

Please read page 3 of the cover, and cheer and help us, one and all, by a *prompt renewal*. You shall be well repaid.

THE IMPERFECT PORTRAIT.

A HOLIDAY ART DRAMA IN TEN PARTS.

Those photographers who aspire to the name and fame of *artist*, will do well to study this sad drama when contemplating the "new leaf" which they propose to "turn over" for 1881. No one *not* an artist can ever understand what the knight of colors has to *go through*. Here is an emphatic example, for which we are indebted to photo-engraving, and the *Fliegende Blätter*, an esteemed German cotemporary in picture literature.

The illustrations are in the order in which the events occurred, and tell their own story. Read it all.

If "club-rates" continue to prevail, soon we shall see the patron have the upper hand, and the poor photographer maltreated as the "artist" now so often is.

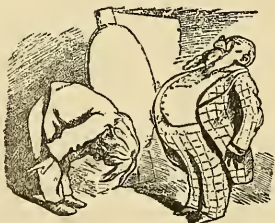


Fig. 1.



Fig. 2.

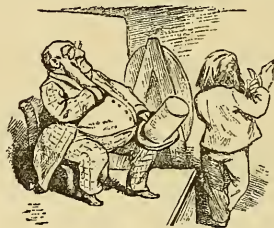


Fig. 3.

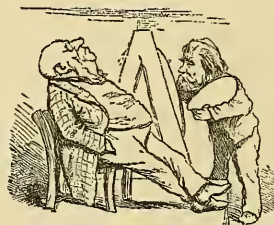


Fig. 4.

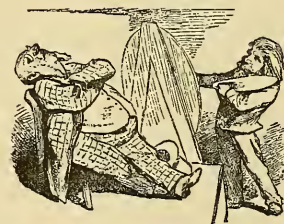


Fig. 5.

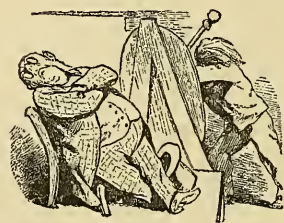


Fig. 6.

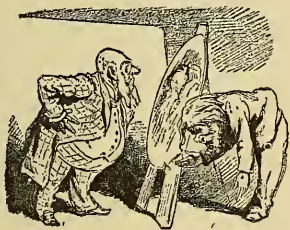


Fig. 7.



Fig. 8.



Fig. 9.



Fig. 10.

MORAL.

Woe be to those who take their patrons napping. How often it is that our best efforts are used against us!

"THE SINEWS OF WAR."

EDITOR PHILADELPHIA PHOTOGRAPHER.

DEAR SIR: We do not mean to infer, from the title we have chosen, that there is to be a "call to arms," but, on the contrary, our mission is to be one, we hope, wholly of

peace. Whatever may appear warlike will be the combating of error, and the struggle against unjust imposition, which may tend to hamper the progress of our art-science. In order to do very much good, and to make the PHOTOGRAPHERS' ASSOCIATION OF AMERICA a success, the necessity of a healthy treasury was felt; and the Executive Committee thought a proper plan would be to invite the assistance of the dealers and manufacturers, and all those who in any way received benefit from photographers. A circular was prepared and sent out, and the responses are coming in fast, bringing joy to the hearts of the Executive Committee that they can, with the "sinews of war" so liberally bestowed, promise a rich treat to the fraternity who will assemble in convention next August. Thus far, from the number who have responded, only one has refused or spoken a discouraging word, and we think that one will see the error of his ways, and soon bring a peace-offering.

The place of honor must be accorded the house of A. M. Collins, Son & Co., who, through their Mr. Edward Cope, in a personal interview with the writer, voluntarily made the following offer, introducing it with expressions of the interest his firm felt in the efforts of the fraternity to build up by associated work a higher standard of excellence for the art-science of photography and its professors. Here is the offer: "A. M. Collins, Son & Co. will give to the Photographers' Association of America \$100 each year, so long as in their judgment the association is fulfilling the objects for which it was established."

When the association ceases to be a benefit to the fraternity, the hundred dollars is cut off, which is all right and proper. Now comes the list of subscribers to date; and I want all to enjoy the following good letters, which have the ring of the true metal. I hope they will urge the lukewarm to immediate action:

GAYTON A. DOUGLASS,

Secretary Photographers' Association of America.

DEAR SIR: Yours of the 11th duly received; glad to hear things are looking well for the Photographers' Association of

America, as I would like to see it prove a success, of which I have no doubt, if the leading photographers in America will only come forward at once and enroll themselves, and swell the list of membership, which they ought to do for their own interests. And it will be a great benefit to all, as well as to make the Photographers' Association of America such that any one will feel proud to be one of its members! It will be an honor to the country in which we all have a pride to see it excel any other in the world. You can put me down for \$100. If the photographers will respond as they can, we can have a fund in the treasury, at our next meeting, of at least \$5000.

With much respect, I remain

Yours, fraternally,

BENJ. FRENCH.

Boston, November 16th, 1880.

GAYTON A. DOUGLASS, Esq.,

Secretary Photographers' Association of America.

DEAR SIR: We are only too glad of an opportunity to respond favorably to your circular, soliciting contributions for the maintenance of a "healthy treasury" for the P. A. of A. This is of as vital importance, as milk to the new-born babe. May our "babe" grow in wisdom and stature, and wax valiant and strong in its endeavors to elevate the standard of photography.

Accept the inclosed check for \$100 as our quota of "sustenance," and always count on us for such aid as we can give.

Yours truly,

SCOVILL MANUFACTURING COMPANY,

W. IRVING ADAMS, Agent.

New York, November 24th, 1880.

That's the kind we want, Mr. Editor; and now, if the readers of your journal who have not come into the fold, will send right on and secure a membership, our labors will not have been in vain.

J. W. Bryant, Laporte, Ind., \$20; J. A. Anderson, Chicago, \$25; Douglass, Thompson & Co., Chicago, \$25; Hiram J. Thompson, Chicago, \$25; Chicago Refining Company, Chicago, \$20; S. H. McElwain, Chicago, \$10; G. Gennert, New York, \$25; L. Pattberg & Bros., New York, \$25; J. F. Magee & Co., Philadelphia, \$25; Gatchel, Hyatt & Mullett, Louisville, Ky., \$20;

Gatchel & Hyatt, Cincinnati, O., \$20; Gatchel & Hyatt, St. Louis, Mo., \$20; Scovill Manufacturing Co., \$100. Total subscription to date \$560, and more to follow next month.

GAYTON A. DOUGLASS,

Secretary.

SOCIETY GOSSIP.

THE NEW ENGLAND PHOTOGRAPHIC ASSOCIATION.—The November meeting of the Association was held at 333 Washington Street, Boston, November 3d, with Vice-President R. B. Wilson in the chair. Sixteen members present.

Mr. Wm. Hudson, of Hingham, Mass., was present, and gave an interesting talk on the gelatin dry-plate process. The members were shown a number of negatives of out-door subjects, with prints of same, and some lantern slides. He alluded to his experience with gelatins, and after having carefully tried most all kinds in the market, has settled on the French Coignet gold medal brand as the most suitable for the purpose. He also told of his early experience when blistering, frilling, etc., were so common and hard to overcome, but assured the members that he now worked the dry-plates with absolute certainty. Further on he showed the meeting some 8 x 10 negatives of heads, all one subject, by both wet and dry process, the dry receiving half the exposure of the wet. His dry-plates being made particularly for landscapes, gave negatives with too much contrast for silver printing. This can be remedied in the making of the emulsion.

Although extreme rapidity is attainable, plates requiring one-half the exposure given in the wet process give the best results. A vote of thanks was given Mr. Hudson.

Mr. George S. Bryant was elected an honorary member of the Association.

The best method of ventilating the dark-room will be talked of at the next meeting.

W. H. PARTRIDGE,

Secretary.

PHOTOGRAPHIC SOCIETY OF PHILADELPHIA.—The regular monthly meeting was held November 4th, 1880. The President, Mr. Joseph W. Bates, in the chair.

The minutes of last meeting were read

and, after a correction by Mr. Graff, approved.

Mr. Browne, on behalf of the Exchange Club, deplored the want of enthusiasm among the members, and strongly advised more stringent rules.

The President appointed Messrs. S. Fisher Corlies, Samuel Sartain, and Samuel M. Fox as Executive Committee of the Exchange Club for the ensuing year.

Mr. Samuel Castner was unanimously elected a member of the Society.

The election of officers for the ensuing year resulted as follows:

President.—Mr. Joseph W. Bates.

Vice-Presidents.—John Carbutt, George W. Hewitt.

Recording Secretary.—C. R. Pancoast.

Corresponding Secretary.—Dr. Carl Seiler.

Treasurer.—S. Fisher Corlies.

On motion of Mr. Fox, the following was adopted: Learning that Mr. W. Willis contemplated a visit to Philadelphia, in the interest of his business, the Society would be pleased to have him attend one of their meetings, and, if agreeable, to illustrate the practical workings of the platinum process, and that the Secretary be requested to communicate with Mr. Willis.

Mr. Fox exhibited some fine specimens of work from both emulsion and gelatin negatives. The extreme rapidity of the latter was shown by the fact that the average exposure for gelatin was twelve to fourteen seconds, while for emulsion, six to ten minutes.

Mr. Browne exhibited two instantaneous photographs of railway trains in motion, the work of Mr. Castner. They were made on Keystone gelatin plates.

On motion of Mr. Corlies, Mr. Samuel Castner was elected a member of the Exchange Club.

Mr. Carbutt stated, to those interested in gelatin plates, that the spent alkaline developer acted well as an intensifier after the mercurial bath, and, in fact, giving better results than the usual process.

Mr. Bell stated that the acid pyro and silver intensifier were unsuited to gelatin plates.

A recess was then taken, to examine the collection of photographs and lantern slides

made by Mr. Wallace during the past summer, while abroad. These pictures comprised landscapes, street and architectural subjects in Goslar, Limburgh, Dinant, and Ypres, and were fully up to Mr. Wallace's already high standard of work.

The negatives of these pictures were made on emulsion and albumen plates; and it is worthy of note that the pellicle used to prepare the former plates was over two years old, and had crossed the Atlantic three times.

On motion of Mr. Ellis, the thanks of the Society were returned to Mr. Wallace for the pleasure which the members had experienced in examining this beautiful collection of views.

Mr. Joseph M. Wilson exhibited a collection of three hundred views, collected by him while abroad. They were bound in three volumes, in a novel and substantial manner, and were much admired by the members.

On motion, adjourned.

A regular meeting was held November 18th, 1880, the President, Mr. Joseph W. Bates, in the chair.

The minutes of last meeting were read and approved.

Mr. Browne called the attention of the members to the death of Dr. Alexander Willcocks, giving a short history of his connection with the Society.

On motion of Mr. Corlies, the following preamble and resolutions were unanimously adopted:

WHEREAS, The Photographic Society of Philadelphia has learned with sorrow of the death of Alexander Willcocks, M.D., one of their former Vice-presidents and oldest members,

Resolved, That the members sincerely feel his loss, and desire to express their appreciation of his interest in the welfare of the Society, and pleasure they have derived from associating with him.

Resolved, That a copy of the foregoing resolution be sent to his family, and also be published in the evening papers.

Mr. Corlies, on behalf of the Exchange Club, reported that he had written to the

delinquent members, but had only received one reply as yet.

Mr. Richard W. Davids was proposed for membership by Mr. Samuel M. Fox.

A communication from Mr. Henry Greenwood, of the *British Journal of Photography*, relative to the organization of the Society, was read, and, on motion, referred to the Secretary for action.

Mr. Browne gave a short description of an improved camera-box, dry-plate holders, etc., designed to supply a long-felt want, namely, that of a good cheap outfit. In the speaker's estimation, the apparatus was all that could be desired, and was put at such a moderate price as to be within the reach of all.

Mr. Carbutt exhibited one of Darlot's rapid hemispherical lenses for 5 x 8 plates; but not having tried it, could give no data concerning its rapidity, definition, etc.

Mr. Carbutt also exhibited some excellent gelatin negatives made by himself and Mr. Corlies. They were made with a No. 1 Euryscope lens, which, for fine definition and evenness of illumination, was unexcelled.

On motion adjourned.

C. R. PANCOAST,
Secretary.

CHICAGO PHOTOGRAPHIC ASSOCIATION.—The regular monthly meeting was held in their rooms, College of Pharmacy building, on Wednesday evening, November 3d. President Rocher in the chair.

Minutes of last meeting read and approved; Mr. Green correcting the Secretary, in that, in his report of his remarks, he said five per cent. of albumen remained on the plate after rubbing with alcohol and cotton, whereas it should be ninety-five per cent.

Mr. T. P. Marayatt, of Elgin, and Mr. Meyers, of Chicago, were elected members.

The subject for the evening was introduced by the Secretary, who stated that he had not prepared a set paper, but, adopting a suggestion of Mr. Smith's, he proposed putting a series of questions, beginning with the various ingredients and ending with their mixture. He would first ask the ex-

pression of the members as to their opinion regarding alcohol.

MR. DOUGLASS.—That the generality of the profession use Atwood's is, I believe, understood; the reason, of course, being its reliability and uniformity.

QUESTION.—What do you understand is the particular merit in the manufacture of this especial brand?

MR. DOUGLASS.—As I understand it, the manufacturers procure a fine brand of alcohol, much of it from the distilleries in this State and in their factory in Boston, by treating it with permanganate of potash, freeing it of water and other impurities.

MR. SHAW.—I have always used alcohol bought and made right here in the city; a lump of lime will free it of all water.

MR. ROCHER.—I once, and only once, tried home-made, but use nothing but the Atwood's.

MR. BALDWIN.—Atwood's is what I always use.

MR. SMITH.—The great drawback with the home-made goods is, to my mind, their varying strengths, rendering it impossible to feel sure of what you are getting. I use Atwood's simply on account of its reliable character.

MR. BEEBE.—I may say then that the general expression of the society is, that Atwood's is the favorite, and well deserves its good reputation. We will now, if you please, take up the matter of ethers.

Not much time was spent in this part of the discussion, as it seemed the unanimous opinion that the two or three favorite brands, as supplied by the stock-houses, need no stronger proof of their value and character than their constant and satisfactory use.

MR. BEEBE.—I will now ask for hints and opinions as regards cottons. Will Mr. Rocher kindly give us his experience?

MR. ROCHER.—There are a great variety of cottons in the market; but I have for many years confined myself to those of Anthony's make, using for general work their Soluble No. 1; for vigorous negatives, their Negative; and for my large plates, their Climax. I have also used, by way of experiment, Hance's Delicate Cream, and find it very good.

MR. KLEIN.—I have always used Anthony's Snowy.

MR. DOUGLASS.—I use in all that I make, Tomlinson's, who is in Cooper's laboratory; the brand he makes being made after a French recipe, and I ask nothing better.

A MEMBER.—It is sometimes stated that the manufacturers simply make one kind of cotton, and then put it into different styles of boxes, and give it different prices, leaving the results to the somewhat vivid imagination of the fraternity.

MR. SMITH.—This may be so; but there is a great difference in the cottons of different manufacturers, arising from the fact that they use different staples in producing gun-cotton. The fibre and quality of the cotton will of course be affected by the soil, climate, and conditions under which it was grown.

MR. ROCHER.—It is understood, I believe, that the cotton prepared with the acid very hot into which it is immersed, works quicker than that prepared at a lower temperature. In regard to the mixing of plain collodion, the proportion of cotton was put all the way from four and one-half grains to seven, dependent upon quality of work desired.

Considerable emphasis was put upon the proportions of the alcohol and ether varying with the season—an excess of alcohol predominating in summer and of ether in the winter, the general proportions of three to four being observed.

In regard to the manner of iodizing, the preparation of an alcoholic solution of the salts was, by most members, deemed the better plan, which, with plain collodion, was used as needed.

MR. GREENE.—I should like to ask in regard to the keeping qualities of this solution. I prepared some that kept very poorly.

MR. ROCHER.—I have never had any trouble. Have used it a year old with complete success.

MR. EDGEWORTH.—I have also kept and used it, under the most varying conditions of temperature, with every success.

MR. GENTILE.—It is the European way of doing, as the plain collodion and iodizing solution, hermetically sealed, are sent to you separate when ordering, say of an

English stock-house. I have seen it used five years old.

MR. SMITH.—The keeping qualities of such a solution depend entirely upon the kind of salt used; the stable ones of cadmium, ammonium, and potassium will keep, no doubt, but the salts of silver, zinc, manganese, arsenic, etc., will not, but will throw down a deposit.

MR. BEEBE.—If the members will now give their views as to the proportion of iodine and bromine salts most desirable, we will be able to close this discussion.

MR. ROCHER.—I should say, in a general way, four to one.

MR. DOUGLASS.—Five to two.

MR. SMITH.—I should say that it depended upon the base of the salt used, in that some salts contain more iodine and bromine than others. I can, for instance, tell you of a first-rate collodion that can be made with three grains bromide of cadmium and five grains iodide of ammonium; then, again, I can give you one, very good too, in which the proportions are one to four.

Mr. Edgeworth here spoke very highly of a particularly fine iodide of ammonium made by Mardock of Chicago.

Mr. Smith thought that Anthony's iodide of ammonium was the best he had seen.

Mr. Rocher said he had for years used Magee's salts.

The Secretary asked as to the relative difference between the foreign and American made salts, and the unanimous verdict, Mr. Gentile only dissenting, was that the homemade article was as good in every respect.

President Rocher introduced Mr. Meyer, of this city, a maker of dry-plates, whose plates he had tried, and recommended heartily, having an especial softness of a most pleasing character.

On motion, adjourned.

J. E. BEEBE,
Secretary.

Do not forget, please, that hereafter, all letters to us should be directed to Nos. 912 and 914 Chestnut Street, to which locality we have removed our office and entire business. Read our advertisements this month.

GERMAN CORRESPONDENCE.

Photophone and Photo-telegraph—Nitrite of Silver in the Negative Bath—The Strength of Ammonia for Alkaline Developers—Some New Facts about the New Emulsion—Dr. Eder's Process for Making Gelatin Emulsion.

AMERICA is once more ahead of us. After presenting to the rest of the world the telephphone, three years ago, she now causes universal excitement with her photophone; and I am convinced that in three years hence you will have the photo-telegraph added to your manifold inventions, so that an enterprising impresario in America, on the hunt for some celebrated European Diva, may cable her, in a business-like manner, "Please cable me your conditions and portrait."

Now, to show that such a thing is not at all out of the range of probabilities, I will treat you to an idea, showing how such photo-telegraphy might be realized. No patent claimed thus far!

Insert in an electric current a selenium plate which is in the focus of a photographic camera, focussed, let us say, on a portrait. The selenium plate, it is understood, undergoes a modification of its conducting power through the influence of light. The strongly-lighted parts conduct better than the others. Now, a metallic pencil is fixed so that it traverses the reverse side of the plate in zigzag, in such a way as to touch every individual point of the selenium plate gradually, one by one; and, as a consequence, the electric current in the conductor will become stronger or weaker as the pencil touches strongly- or weakly-lighted parts of the selenium plate. If the current is now conducted to a distant station where a similar metallic pencil is attached, moving in the same way over a sheet of paper which has been saturated with a substance disintegrated by an electric current and blackened by it (the stronger the current the stronger the disintegration), it will be noticed that the spots made by the second pencil will be the blacker the stronger the corresponding, identical point on the selenium plate, touched simultaneously by the first pencil, is lighted.

The lighter and darker spots produced thus gradually, will form a negative which may be printed in any way desired.

You will see there is no humbug about this. It may be that my idea is not even new; and I leave it to Bell and the wizard of Menlo Park to spin it out.

From theory to practice there is, of course, a big step. Goethe says:

*"Grau, treuer Freund, ist alle Theorie,
Und gruen des Lebens goldner Baum."*

Which, literally translated, means:

*"Friend, gray is all your theory,
And green alone life's golden tree."*

Let us now turn to a practical subject. It has been for some time already a known fact that nitrite of silver produces foggy plates in the negative bath prepared with such silver salt; and the many complaints heard now about the quality of the silver salts in the market induced Mr. Belitski to closely examine the effects of the bath containing nitrite of silver.

It is to be observed that nitrite of silver is very difficult to dissolve. A silver-bath can dissolve, per ounce, little more than one grain nitrite of silver. Mr. Belitski prepared different baths, containing per ounce one, one-half, one-quarter, one-fifth, and one-tenth grain of nitrite of silver. He experimented first with the baths containing the highest percentage of nitrite of silver, and obtained with these freshly-prepared baths very different results, until he found out that the time of immersion, as well as the time the plate remained in the cassette until developing, exerted an extraordinary influence upon the result. If the plate is left in the bath only as long as is absolutely necessary, then rapidly exposed, and at once developed, a picture almost free from fog may be obtained with a quite freshly-prepared bath, at not too high a temperature (14° R.), if the same be not more than half saturated with nitrite; but as soon as the plate is silvered a little bit longer, or left in the cassette longer, in every case very thick, unremovable fog will form, which, with long (one-quarter of an hour or longer) silvering, becomes so thick that,

at last, no trace of the picture will appear. With short silvering, and the plate being one-quarter of an hour, or somewhat longer, in the cassette, very thick fog is also formed; but it is yet possible to see that a picture is under it.

If the strong nitrite-of-silver baths, which have not been acidulated any further, are left to stand a few days, they will become neutral, or almost alkaline, and the formation of fog therefore increases still more. This is explained by the fact that the free nitrous acid, which reacts strongly red upon litmus-paper, disappears gradually by the process of disintegration. The formation of fog stops entirely, however, even with prolonged silvering or remaining in the cassette, if enough nitric acid has been added to disintegrate all the nitrite, and leaving some little nitric acid in excess in it.

The fact that baths which have been acidulated spontaneously turn soon alkaline again has often been noticed already. Partly the nitrous acid contained in the bath, and partly the alkaline reaction of some iodine salts, may be the cause of it. Of late, it has been preferred to keep the iodine salts alkaline, so that they should remain white the longer. Completely neutral iodine salts are disintegrated by the light, and then assume a yellowish color. If, now, collodion is treated with it, each plate which has been prepared with such collodion will carry some trace of alkali into the silver-bath, and the result will be that the small quantity of free acid contained in it will eventually become saturated.

As the winter approaches, the demand for dry plates increases. I know some studios here which, in bad days, use twenty to thirty dry plates.

The Nelson developer, which I mentioned in my last letter, finds deservedly more and more favor here; and yet I have heard of many failures from photographers who have used the same. The reason lies alone in the too weak ammonia.

It is surprising how rapidly ammonia loses strength if kept in badly-corked vessels. From a fresh bottle of ammonia, I needed, at first, eight drops for developing; three weeks later, when the largest part of the liquid had been used up, it required

more than ten drops. The strength of the ammonia can be easily determined by its specific weight—100 cubic centimetres of strong ammonia must weigh 91 grammes. The lighter the weight the better the ammonia. If, for mixing Nelson's developer, no ammonia of sufficient strength is at hand, it is best to add, while developing, ammonia drop by drop, until the development proceeds normally, and then to intensify the remaining developer with as much ammonia as had been used before.

For my new emulsion plates I use now also the sugar developer exclusively. I may remark, on this occasion, that this emulsion had been given to a commission for examination by the Photographic Society of Vienna. The result of the examination has been telegraphed me as follows: "Your emulsion was victorious over all gelatin emulsions."

I hope that the emulsion may meet with the same success in America.

We are again indebted to Dr. Eder, who is indefatigable in photographic researches, for a number of highly interesting publications, which are invaluable for the production of highly sensitive gelatin plates. I will come back upon this subject later, and will now only report on a superior method for producing sensitive gelatin plates, which I tested myself with very gratifying results.

The first method, with oxide of silver ammonia, produces plates at least six or seven times more sensitive than wet plates. The necessary manipulations are simple and easy to make, require little apparatus, and do not demand constant warm digesting, shaking apparatus, light-proof vessels, etc. A common cook-pot, an alcohol lamp, a thermometer, and a reliable dark-room are the only requisites. The plates show great strength and warmth, and keep wonderfully clear.

Dr. Eder says: "I believe this method to be the best for photographers who want to make themselves, with simple means, a highly sensitive emulsion. The emulsion works so clear and well that not alone landscapes and portraits, but also reproductions of line-drawings, without intensifying, can be easily obtained.

"I can recommend the following: 24 grains of chemically pure air-free bromide of potassium are dissolved in 300 c.c. distilled water; 30 to 45 grammes of gelatin added, and the whole, after about one-quarter hour's soaking, is immersed in a water-bath of about 35° to 45° C. until the gelatin has dissolved clear.

"Separately 30 grammes of nitrate of silver are dissolved in 300 c.c. water, and gradually, drop by drop, enough ammonia is added until the precipitate which had formed dissolves again clear. Until now, both operations can take place in the daylight; but now it is necessary to work with the possibly weakest dark-red light, and to the gelatin solution, which has been cooled down to 35° C., the solution of silver is gradually added under repeated vehement shaking, and the rest of the silver salts is rinsed out of the bottle with 50 c.c. of water. After this, the bottle is placed again in the silver-bath, which must have 35° C. (but not more), and left in there fifteen to thirty minutes, leaving the water-bath cooling off gradually, as it takes place by standing in the air.

"During this time the temperature may fall to 25° C., without causing the gelatin to congeal, but the quantity of the warm water must be large enough to ensure the temperature not to fall below 25° C. during the digestion."

About the second method of Dr. Eder, which offers more difficulties, I will report later; it would be, in any case, almost impossible to write a letter without having cause to refer to the researches of this excellent photo-chemist.

Yours truly, DR. H. VOGEL.

BERLIN, October 30th, 1880.

PHOTOGRAPHIC MOSAICS, 1881, gives 144 pages of valuable information to the working photographer, and should be possessed by them all. Orders should come in *early*, as already several hundred lots are sold. Edward L. Wilson, publisher (removed to), Nos. 912 and 914 Chestnut Street, Philadelphia.

FRENCH CORRESPONDENCE.

Rapid Stop of Mr. Stebbing Measuring the Time of Exposure—Necessity for an Appliance of this Kind—Printing in Tissues by Mr. Janard—Advice in the Use of Gelatino-Bromide Plates—French Photographic Syndicate—Vote Relating to the Chicago Convention—Importance to Photographers of Forming Syndicates and Establishing Correspondence between the Groups of Different Nations—Circular of Mr. Christian; Twelve Portraits in Two Minutes without Light.

ONE of the *desiderata* of the present time is the invention of an instantaneous stop, or, at least, a very rapid one, capable of measuring the time of exposure. Already, in what concerns our humble part of initiative, we have not only asked for it on a number of occasions, but we also pointed out in what way this instrument might be made, the necessity of which is so urgently felt.

Our esteemed and capable colleague, Mr. Stebbing, who has just been appointed by the Minister of Public Instruction collaborator in our professorship at the National School of Decorative Arts—a nomination, it may be said in passing, that has given us the greatest pleasure—Mr. Stebbing, we say, prompted, perhaps, by our suggestions, of which, however, he had no need, has just made a stop such as we desired, such a one as will prove useful in the present practice of photographic art.

This stop is simple and ingenious in its construction, and can be regulated beforehand for a specified number of fractions of seconds, by means of a spring of which the tension is increased, according to the degree of rapidity required in the exposure.

The graduation of this appliance is obtained by means of a metronome whose pendulum has the movement of a second; an arc of a circle, graduated in sixtieths of a second, is placed back of the metronome, so that when it is in operation it gives the number of fractions of a second, or the divisions marked by the pendulum whilst in movement. The spring being first placed at a minimum—that is to say, just sufficiently for the stop to work—a print is

made of the metronome in motion, and we see how many divisions are marked by the pendulum. If there are fifty, for example, No. 50 is placed at this stopping-point of the spring, and so on, tightening it more and more, and this gradually. If care has been taken to use a good clock-spring, well tempered, and of which but a relative part is used, limited to the force of tension, so as not to exhaust it, we may be sure that it will always give, according to the degree of tension obtained, and noted beforehand in its connection with the given velocity, a duration approximately the same, and also determined beforehand for an ascertained tension.

We hope that Mr. Stebbing will give to the trade this appliance, which is as useful as it is ingenious. The necessity for such an instrument is every day becoming more pressing since the use of plates as rapid as those with gelatino-bromide of silver.

A proof of this necessity becomes manifest when we wish to operate with a certain degree of precision. Thus, a few days ago, experimenting with divers gelatinous plates, we calculated, with the greatest approximate precision, the necessary time of exposure so as to always bring back the experiments to the same conditions of luminous action, everything else being equal, however. The light varied at each moment. Sometimes we had eight degrees on our photometer, sometimes nine, sometimes five. Now, the time of exposure with a diaphragm of eight millimetres in diameter, and a focal distance of twenty-eight centimetres, should be 3'' and 50''' for light No. 8, 4'' and 21''' for light No. 7, and 3'' 24''' for light No. 9.

Every time that it was necessary to add the fractions of a second to the seconds, you can judge of the difficulty that exists in a special instrument to arrive at posing at sight, either at 3'' 50''' or 4'' 21'''. It is absolutely impossible, even with the best time-keeper.

How much more difficult is it when the differences are to be measured by thirds. How is it possible to know if the exposure has lasted 10''' 15''' or 20'''?

Unfortunately, the greater number of inventors of stops have taken more pains to

obtain great rapidity than to measure and regulate in advance the more or less rapidity which may be required according to the nature of the object to be reproduced, and the light in which it is placed. It is this want that Mr. Stebbing seeks to supply.

An interesting attempt in the application of photography to the ornamentation of tissues was made a few years ago by Mr. Janard, a photographer at Ecully, near Lyons. Specimens of this kind of decoration were shown at the Universal Exhibition of 1878, but instead of having been classed in the photographic section, they were placed with the silks, so that the photographic jury could make no mention of them.

It is unfortunate that Messrs. Janard & Guiot, who have made experiments with this interesting application on a large scale, should not have placed at least a few of their remarkable specimens in the special photographic exhibition, say in class No. 12.

Be that as it may, we have just received from Mr. Janard a piece of satin covered with designs obtained by photography; and from the information given to us by the inventor of this process, it would seem that these impressions, which can be made upon stuffs and pieces of all sizes, would not cost more than twenty-five centimes the square metre, which estimate results from the report of an expert appointed by the Lyons Tribunal of Commerce.

The value, or rather the cost, of the sensitizing salt used by Mr. Janard is from one and a half to two francs the kilogramme, and it is used in the solution at fifteen per cent. It is probably an iron salt; but it appears that it is not gallate of iron which forms the coloring matter of the prints.

Mr. Janard asserts, moreover, that his prints have a durability much superior to that of images obtained with gallate of iron.

In short, we have here an industrial process capable of rendering great service to the art of decorating tissues, and we are surprised that it has been so little resorted to.

The prints on silk that I have before me are of so excellent a finish, that it could not be obtained with the engraved plates gen-

erally used for printing on tissues; and it seems to me, there is much to do in this direction, as we have at our disposal the infinite varieties and modifications which fashion introduces in dress, as well as in all other textiles. Besides, by the aid of processes well known to dyers, it is possible, by means of superpositions skilfully arranged, to attain not only prints having the photographic finish, but also the divers colors of polychrome impressions. However far we may have gone in progress, how much yet remains for us to do?

Much has already been written upon the gelatino-bromide process, but all has not been said. It is but necessary to see the many processes due to collodion to be convinced of what yet remains to be done, to be said and written, concerning a process which is still new, and whose causes of chemical variation are more numerous and less known than those that pertain to collodion.

We have undertaken a series of experiments with this interesting product, now that it exists industrially on a vast scale. Our object being to classify, as far as possible, according to their value, the divers preparations coming from the many different manufacturers in all countries.

This study is of great interest, and it leads us to a wholesome appreciation of the process which we are now treating.

Without reverting to what we have already said at the commencement of this letter, we would remark that it is important to become familiar with the respective degree of each preparation. Thus, an operator who, instead of confining himself to the use of plates from the same source, would use sometimes Monckhoven plates, sometimes Stebbing plates, then preparations from Sivan instead of from Wratten & Wainwright, would each time meet with films of a different nature.

Some are thicker than the others; some have more solidity in their adherence to the plate. The rapidity is not the same for each kind of manufacture. Yesterday, for example, we were obliged to modify our time of exposure from one to two and to three seconds in changing plates. Those of Monckhoven were rapid to the degree of

requiring an exposure of but a single second in a medium light, with a diaphragm of eight millimetres and a focal distance of twenty-eight centimetres. Plates coming from Mr. Schaeffner, used in the same light and in the same conditions, required an exposure three times longer.

It is therefore essential, before starting on an excursion with a stock of plates, to ascertain the ratio of their sensitiveness compared with a sensitiveness taken as a point of departure; without which, with plates not experimented upon beforehand, we would be liable to make very bad work, deceived by former experience in working with other plates.

The nature of the developer has also great influence on the result obtained in working with different plates. Some develop better with pyrogalllic acid; others, again, act better with oxalate of iron.

We have had this experience: Plates certainly well exposed, gave us, with oxalate of iron, images very intense seen at the surface by reflection; but seen by transparency, a very weak image was shown of a very light gray: even the high-lights gave but a gray tone.

The idea came into our head to combine these two developers; that is to say, to treat with the pyrogalllic acid developer these same plates which had first been treated by the iron salt, and carefully washed. The result was splendid, and we had, in intensity and depth, what the iron had only given us very superficially.

We reached the conclusion that not only are there preparations with which it is better to use one of the two developing solutions, but that, besides, there is an energetic means of strengthening the negatives developed with the oxalate of iron by plunging them into a solution of pyrogalllic acid to which have been added ammonia and a few grammes of bromide of ammonium.

The Syndical Chamber of Photographers had its meeting on the 19th of October last. On this occasion we made known the obliging and friendly communication sent us by our most worthy editor, Mr. Wilson, on the subject of a possible understanding between the association of photographers, the basis of which was recently set forth at

Chicago, and the French Syndicate of Photography.

I need not say that our syndical association, which is extending more and more throughout all France, and to which it will have soon adherents everywhere, could not fail to receive with pleasure the idea of a fraternal understanding between the two groups. From this intimate correspondence between two associations of men devoted to the same work, to the same common cause, important advantages must result, too long to enumerate here, but that all can foresee.

The American association was, therefore, received with great favor as a corresponding society of the French Syndicate, which last asks for an equal reciprocation. It was also decided that a letter should be sent, in the name of our syndicate, to the president of the American association, to offer to him the honorary presidency of the French Syndicate, and extend to him the assurance of our devoted fraternal sentiments. It is thus that it should be, especially since science, more than any other human agency, has done away with all boundary lines.

It is in this coming together of different people of different countries that we are to seek the power to form but one group, having a head in each separate State, but constituting one great institution under the name of the International Syndicate of Photography. In this combination we shall all arrive at the same rank, and our essential object will be to help each other as much as possible in all those circumstances in which collective action is more efficacious than independent proceedings.

In accord with the American association, we are elaborating our project of an effective understanding, and we will give each other mutual help in view of the complete success of our efforts.

A singular circular is now going the rounds in France. The author of it offers to make twelve portraits in two minutes, without light, from any negative that may be given to him. As in scientific matters we must not be prone to doubt, we prefer, for the present, to refrain from saying that the thing is impossible. Now, either it is

or it is not; if it is, then it is something curious, and marvellous progress has been achieved. If it is not, why then this mystery? Up to the present time no proofs have been offered of the facts advanced; but Mr. Christian asserts that he performs this wonder; that the results are equal in value to those obtained by the ordinary processes; and that he is only prevented from giving the proof of what he sets forth by the desire to obtain subscriptions at five hundred francs each, a sufficient number of which he wishes to collect before making known his secret. In short, he resembles those itinerant jugglers who cannot succeed with their tricks unless a specified number of coins is placed before them.

Mystery and lucre!

LEON VIDAL.

PARIS, November 1st, 1880.

TRANSLATION OF THE RUSSIAN COVER.

PHOTOGRAPHER.

ORGAN OF THE

5th Department of Imperial Russian Technological Society.

EMBRACING SUN-DRAWING AND ITS APPLICATIONS.

1880.

(EAGLE)

JUNE No. 1.

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Special Editor, WAYTCHESLAF SREZNEWSKI.

Responsible Editor, Q. N. LJWOF.

ST. PETERSBURG:

A. C. SUVORINA, PRINTER, ERTELEFF LANE,
House 11, Apartment 2.
1880.

The above is kindly sent us by Mr. Wm. Klauser, New York, who is a native of St. Petersburg.

OUR PICTURE.

WE close our volume seventeen embellishments with a pretty little study from the studio of Messrs. Loesch & Petsch, in Berlin, Prussia. It has been some time since these gentlemen have favored us with an example of their work; and, even now, we should not be so favored but for the intercessory kindness of our always good old friend, Dr. Vogel. Some time ago, he sent us several large pictures from late negatives by the parties named, one of which was "The Fickle Shadow." At once it struck us as a pretty subject for a holiday picture, and we made reductions from it, by permission, for our purpose. The picture tells its own story. It is lively and lovely in conception, and appeals to the tender feelings of all who love the dear children enough to try to amuse

them. It is a subject, too, which all can attempt on account of its simple nature. Let us see if any of you can succeed so well.

Some intricate lighting may be necessary, and an expert at shadow-making needed with more talent than a producer of "Rembrandt style;" but it will all be good practice, and we recommend it to you.

Our method of copying and reducing such pictures is to mount the large print with starch upon thick plate-glass, light it so as to avoid reflections, and use, say, a Morrison copying lens.

The prints were made at our own establishment upon the S. & M. Extra Brilliant Dresden Paper, imported by Mr. G. Genert, 38 Maiden Lane, New York.

Something well worth study in our January issue, and many fine things are to follow.

Editor's Table.

PICTURES RECEIVED.—From Mr. F. GUTEKUNST, Philadelphia, a splendid 14 x 21 phototype of the Presbyterian Alliance. The group comprises about two hundred members. It is one of the finest photographic productions we have ever seen, and an unprecedented triumph in phototypy art. Several beautiful samples of cabinet portraits, in the "statuary" style, from Mr. W. WYKES, Grand Rapids, Michigan. An extremely pretty subject and most skilfully managed. Mrs. E. N. LOCKWOOD, Ripon, Wisconsin, sends two card pictures of her entrance showcase. The specimens are well selected and tastefully arranged, forming an attractive exhibit. From Mr. J. S. MASON, Medina, O., samples of cabinet work, both bust and full-length positions. Judging from these specimens, and comparing them with former ones, Mr. MASON is one of our growing photographers. We quote from his letter: "If these pictures show any improvement over my work of a few years ago, I can say that a large part of my success is due to a careful reading of your journal." From Mr. F. C. WESTON, Bangor, Me., some beautiful examples of cabinet, promenade, and boudoir-size pictures, gracefully posed and carefully lighted. The work, all through, is excellent. Some splendidly posed and lighted cabinets and panels, from Mr. J. D. CADWALLADER,

Marietta, Ohio, and from Mr. L. T. BUTTERFIELD, Prairie du Chien, Wisconsin, some carefully and tastefully made cabinets, whose excellence, he says, is largely due to his reading of our magazine.

THE *Every Saturday* (Detroit, Mich.) gives a very complimentary notice of the "fall opening" of Mr. J. E. WATSON's photographic rooms in that city. Mr. WATSON has been refitting and enlarging his apartments, and is now prepared to receive the "rush" of fall and winter trade with greater facilities than heretofore.

THE *Western Trade World* (St. Louis, Mo.), in calling attention to the leading business houses in Marion, Iowa, under the heading "Photography," gives quite a lengthy description of the establishment of Mr. H. R. ELLIOTT, and congratulates the city on the possession of such a "model studio" as that carried on under the able guidance of Mr. ELLIOTT.

MESSRS. CHARLES COOPER & Co., New York, send us their November price-list of photographic chemicals. Consult it.

THE *Photographers' Bureau of Information* for October is duly received from the publishers, Messrs. DOUGLASS, THOMPSON & Co., Chicago, Ill.

CORRECTION.—We would call attention to an error in our last number, in which we announced the removal of Mr. L. W. SEAVEY from his old place on Lafayette Place to No. 22 W. Washington Place. This latter address is his private residence. He still occupies his old stand, No. 8 Lafayette Place, where he is ready to receive orders for his famous backgrounds and accessories.

THE ROBINSON TRIMMER always gives satisfaction wherever it is sent. Witness the following: "The Robinson Trimmer you sent me last spring works splendidly. I would not be without it for anything."—J. H. FOLSOM.

OUR readers will find, in another column, a translation of the horrible conglomeration which we gave in our last issue as "the cover of a Russian photographic journal." One of our subscribers, Mr. WILLIAM KLAUSER, of New York, a native Russian, wrote us immediately after the receipt of the November issue, offering to give us translations from the Russian journal, and also inclosing the translation of the photo-engraving of the cover. In closing his letter, Mr. KLAUSER says: "The photo-engraving is a piece of extremely fine work, the finest type, and the finest lines, clean and clear; a marvel of perfection. As to 'Dixville Notch,' I think it is so charming that one cannot take the eyes away from it; aye, better than an oil painting, well selected and splendidly done. Such like we ought to see more in our journals. It is a treat and relief from every-day monotony."

WE have received from the Secretary, Mr. G. A. DOUGLASS, a copy of the "Manual of the Photographers' Association of America, containing the Constitution, By-Laws, and list of officers and members." The greater portion of the book will appear in *Mosaics*.

MR. McDONALD, the photographer at South Bend, Indiana, receives a handsome description of his fine studio in the South Bend *Saturday Tribune*. Especial notice is given to his fine collection of backgrounds, adaptable to every variety of picture.

A CIRCULAR from the New England Photographic Association gives us notice that they are still alive and at work. We give below a list of the officers:

C. F. RICHARDSON, President; R. B. WILSON, Vice-President; W. H. PARTRIDGE, Secretary; E. F. SMITH, Treasurer; W. T. BOWERS, T. R. BURNHAM, A. S. SOUTHWORTH, J. W. BLACK, Executive Committee.

Dresdener Galerie is the title of a beautiful work for sale by our friend, Mr. G. GENNERT, of Maiden Lane, New York. The book—perhaps album were a more appropriate term—is entirely composed, as its title indicates, of copies of some of the celebrated paintings in the Picture Gallery at Dresden. The prints are made by the lichtdruck process, on fine plate-paper; the binding is in bevelled boards, cloth, gilt. Here are placed before the eye the works of RAPHAEL, TITIAN, PAUL VERONESE, ALBERT DURER, LEONARDO DA VINCI, HOFMANN, HUBNER, GUIDO RENI, MURILLO, PALMA VECCHIO, and many others; the book containing fifty of these exquisite reproductions.

To those who love art, and desire to draw inspiration and instruction from the old masters, it offers a rare opportunity of studying their work.

Mr. GENNERT imports these books, and will be glad to supply any one desirous of purchasing a copy. We advise you to secure one without delay. It will help you in ways you least suspect; it will edify, exalt, and instruct. Association and familiarity with what is high and noble are certain to lift one up from the old level; and a collection of pictures like these will do this, and more besides.

ITEMS OF NEWS.—A once sanguine artotyper writes us, October 12th, viz.: "In regard to making artotypes, I am not doing them for regular portrait work, as it does not pay for the small orders that are usually given in a place like this." An honest confession and fulfillment of a prediction.—Do not ask us, please, if the "megatype is 'all that is said for it.'" Refer to page 249 of our last August issue.—Messrs. CROSSCUP & WEST, No. 702 Chestnut Street, Philadelphia, do all our wood- and photo-engraving. Send for their beautiful circular.—We found Mr. W. F. ASHE, New York, the celebrated background painter, with a load of sleighs under way for winter use. His sleigh and winter background combination is beautiful and very desirable. Mr. ASHE is full of good ideas, and can execute them splendidly.—Mr. G. GENNERT, 38 Maiden Lane, New York, has just received one hundred and fifty reams of the new S. & M. non-blistering paper, which he recommends as embodying all good qualities and guarantees. We use it for our pictures. Ask your dealer for it.

ANOTHER 8x10 group of the Photographers' Association of America has come to us from Messrs. CRAMER & NORDEN, St. Louis, Mo.,

printed from one of their dry-plates. It is an admirable picture, and the exposure only three seconds. These gentlemen are certainly making great improvements in their plates.

Mosaics, 1881, is ready. See contents in advertisement.

The Expose, second edition, by Mr. D. BACHRACH, Jr., publisher, Baltimore, Md., is at hand, and presents a neat appearance. Moreover, it contains many useful hints, cautions, and price-lists. The editor is wide awake, and wants to benefit the craft at large. You cannot go wrong in reading what he has to say. The price-list of BACHRACH & BROTHER, stock-dealers, is added.

ROBINSON'S *Pictorial Effect* is having a wondrous sale. Mr. ROBINSON'S writings are too well known to our readers to need recommending by us. Money invested in his book will come back to you fast and well. As an evidence of the way the book goes, we quote the following from a circular issued by our leading stock-house:

"DEAR SIR: A new American edition of ROBINSON'S *Pictorial Effect in Photography* is in press, and will be ready in a few days. So satisfied are we that there will be a large and rapid sale of it, that we have contracted to take two-thirds of the edition, at a price that will enable us to supply you at publisher's rates. Cloth, \$1.50; paper, \$1.00 per copy.

"It is just the book now wanted by American photographers, and, by pushing it, you can sell a large number.

Truly yours,

"SCOVILL MANUFACTURING CO.

"W. IRVING ADAMS, Agent."

The photographer who waits to purchase this book is losing dollars daily. Ask your dealer for it.

TO DRY-PLATE MEN.—One of our veteran workers writes us as follows:

"QUINCY, ILL., Nov. 1st, 1880.

"I wish you would particularly request the dry-plate makers to give their experience in manufacture, including not only their successes, but their failures. I look upon that as the coming process, but not at present prices. They must be made cheaper, or else we must make our own, or continue to use the wet process.

"Yours truly, E. LONG."

SCOVILL MANUFACTURING COMPANY, New York (Mr. W. IRVING ADAMS, Agent), have favored us

with advance samples of BERGEN'S new ornamental card-stand, sold at \$15 per thousand, in five colors, and two hundred and fifty in a box. They are neat and pretty in design. Ask your dealer to send you a few to try.

LEAFLETS TO THE FRONT AGAIN.—We are continually hearing of the good work done by our little favorites, the "leaflets." Here is what one customer says when sending an order for a fresh lot: "I have, for the past week, been thinking of writing to you, and telling you of my good luck, which was brought to me by one of your little pamphlets—*To My Patrons*—which strayed away out to the Rocky Mountains, and brought me back a picture to be copied in ink. So much for the little leaflets."—M. H. ALBEE.

It seems even these modest little emissaries can do some missionary work for those who send them abroad with a ready hand.

We are glad to see that Mr. J. A. SHERIFF, San Diego, Cal., has received a complimentary notice of his gallery and pictures in the *San Diego Union*.

THE Waterford (Pa.) *Leader* gives a flattering notice to its fellow-townsmen and leading photographer, Mr. McDANNELL. This gentleman (so the *Leader* says) is turning out the best pictures ever made in Waterford. We hope the citizens are showing their appreciation of fine work by giving their liberal patronage to this persevering photographer.

In response to various inquiries from our readers and correspondents, we would say we know nothing about Prof. H. S. PARK, Worcester, Mass., nor his "lightning processes." We can only repeat our caution to be wary in dealing with secret-process mongers. While on the subject, we will give an extract from a letter just received from one of our readers: "I do not believe, nor did I ever believe, in monopolies and 'process-mongers.' To your valuable journal I am indebted for interesting and valuable information acquired during its existence, also to your personal interest and kind services rendered in my case. I owe you much thanks."—E. J. SOUBY.

THE office of the *Philadelphia Photographer* is now at Nos. 912 and 914 Chestnut Street, second floor, whither we have removed. So direct your letters.

LONDON, 1851.



LONDON, 1862.



PARIS, 1867.



Centennial, 1876.



Centennial, 1876.

ROSS' PORTRAIT AND VIEW LENSES

Portrait Lenses, from 1-4 to 8x10.
Cabinet Lenses, Nos. 2 and 3.
Card Lenses, Nos. 1, 2, and 3.
Triplets, Nos. 1, 2, 3, 4, 5, 6, and 7.
Symmetricals. Rapid Symmetricals.

**We have now
in stock.**

Instantaneous Doublets, all sizes.
Medium Angle Doublets, all sizes.
Large Angle Doublets, all sizes.
Stereographic Lenses, all sizes.
New Universal Lens.

Numerous testimonials pronounce them to be the *best* as well as the *cheapest* Foreign Lenses ever offered to the American Photographer. We will mail price-list on application, and promptly fill all orders.

STEINHEIL'S SONS' NEW APLANATIC LENSES.

We now have a full stock of these Celebrated Lenses, at the following prices:

No. 1—1-4 size, . . . 3½ inch focus, . . . \$25 00	No. 5—10-12 size, . . . 13½ inch focus, . . . \$70 00
2—1-2 “ . . . 5½ “ “ . . . 30 00	6—13-16 “ . . . 16½ “ “ . . . 110 00
3—4-4 “ . . . 7 “ “ . . . 45 00	7—18-22 “ 200 00
4—8-10 “ . . . 10½ “ “ . . . 60 00	8—20-24 “ 350 00

Nos. 1 and 2 are in matched pairs for stereoscopic work.

We feel sure that at least one of these lenses is needful for the successful prosecution of your business, and so solicit your orders.

WE MANUFACTURE, IMPORT, AND DEAL IN ALL KINDS OF

Photo. Goods, Frames, Stereoscopes and Views,

at prices as low as are consistent with the quality of goods furnished. We are indebted to our customers for their patronage during the past *Thirteen Years*, and our efforts shall be to merit a continuance of it.

We have been appointed Trade Agents for

PARYS' AND LINDSAY'S COTTON,

CREMER'S FRENCH LUBRICATOR,

SOLAR AND CONTACT PRINTING,

COLORING IN ALL STYLES, FOR THE TRADE.

ILLUSTRATED PRICE LISTS FREE TO ALL APPLICANTS.

WILSON, HOOD & CO.,

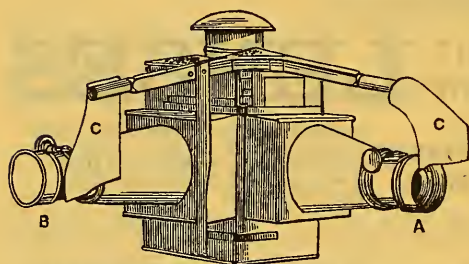
No. 825 ARCH STREET,

PHILADELPHIA.

KEEVIL'S PATENT NEWTONIAN DUPLEX LANTERN.

This new lantern is duplex in form, being fitted with one optical system, projecting in front, shown at *A*, and another projecting from one side, as shown at *B*. The light through the system *A* is transmitted on to the screen directly, in the usual way. At the extremity of the system *B* is fixed a prismatic lens, by which means a disk can be projected on to the screen, central with the one from *A*. The oxyhydrogen jet is arranged on a pivot, which is a fixture in the bottom of the lantern, the centre of rotation being as near the outside surface of the lime cylinder as possible; and by rotating the burner through about a quarter of a circle, the light is brought central with each condenser alternately, and simultaneously the mechanical dissolver (*CC*) opens and closes the objectives.

A Complete Lime-Light Dissolving Apparatus, most Compact in Form, at the Low Price of \$75.00.
With full Oxyhydrogen Accoutrements, \$130.00.



LIST OF ARTICLES NEEDED.

1 Keevil Duplex Lantern, for dissolving views.....	\$75 00
2 30 x 40 best Rubber Bags and Cocks, ..	\$36 00
24 feet Rubber Tubing,	6 00
1 five gallon Hydrogen Generator and Wash-bottle,	7 00
1 Oxygen Retort and Wash Bottle,	7 00
1 Alcohol Burner,	1 00
1 dozen Oxygen Material,	6 00
15 pounds Granulated Zinc,	3 00
1 12 x 12 Screen,	5 00
	<hr/> 71 00

\$146 00

Or the whole splendid dissolving outfit for \$130 cash.

To compensate for any loss of light occasioned by the use of the prism, the condenser of this system is made somewhat shorter in focus than the other one, evenness of illumination being thereby secured. Both objectives are made achromatic, and the definition of the one to which the prism is attached is in no way inferior to the ordinary one. The jets never require adjustment, as every lantern is put to a practical test before being sent out; the best position for the jet being thereby obtained, further adjustment becomes unnecessary. The dissolving apparatus is adjustable and very efficient. The conical fronts are easily detached, and if required it can be used as a single lantern. The *whole lantern* is of metal.

Its small dimensions are much in its favor, the whole packing into a small box, easily carried in the hand. These desiderata are certain to make it a favorite with those who wish for an apparatus of extreme portability.

We have arranged for the sole agency of the United States, and have a stock on hand and for sale. We have thoroughly tried the new lantern, and are charmed with it in every way. It is lighted in a minute, easily adjusted, and gives entire satisfaction.

It is the greatest Discovery yet in Lanterns, and is going to work a revolution in the trade.

Secured by letters-patent in England and the United States.

It is made to sit on any table or stand, and full directions for working accompany it. Send for estimate for a full outfit, *bags, tubing, generator, &c.. &c.* Lists of our new dissolving views will be given on application.

EDWARD L. WILSON,

SOLE AGENT FOR THE UNITED STATES,

116 North Seventh St., Philadelphia.

Specialties.

ADVERTISING RATES FOR SPECIALTIES.—It will be understood that matter under this head is not to be considered as always having editorial sanction, though we shall endeavor to clear it of anything tending to deceive or mislead. Stock-dealers will find this a beneficial mode of advertising, and sure to pay largely. Six lines, one insertion, \$2.00, and 25 cents for each additional line, seven words to a line—in advance. *Operators desiring situations, no charge.* Matter must be received by the 23d to secure insertion. Advertisers will please not ask us for recommendations. We cannot undertake to mail answers to parties who advertise. Please always add your address to the advertisement.

SOLAR PRINTING.

THE WILLIS PROCESS.

Convinced of the permanency of the prints made by the Willis Platinum Process, I have purchased a license for my establishment.

On account of our splendid facilities and long experience in Solar Printing, we have already produced enlargements which the inventor, MR. WILLIS, pronounces the finest he has ever seen.

We rest our case on this testimony.

If dark weather threatens to delay orders, we shall use the Electric Light for printing. Annexed are the rates for Platinotype Enlargements:

Size, 16 x 20,	unmounted \$1.75;	mounted \$2.25
" 18 x 22,	" 2.25;	" 2.75
" 20 x 24,	" 2.50;	" 3.00
" 22 x 27,	" 2.75;	" 3.50
" 25 x 30,	" 3.00;	" 3.75
" 26 x 32,	" 3.25;	" 4.00
" 29 x 36,	" 4.50;	" 5.50
" 30 x 40,	" 6.00;	" 7.25
" 35 x 45,	" 7.75;	" 10.00
" 40 x 50,	" 10.00;	" 13.00

BY THE SILVER PROCESS.

PLAIN OR ALBUMENIZED PAPER.

Size, 16 x 20,.....	\$1.50;	on strainers,.....	\$2.00
" 20 x 24,.....	2.00;	"	2.50
" 25 x 30,.....	2.50;	"	3.00
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Mounting on Card Board (22 x 28) 50 cents.

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"I think the print very fine and of excellent color for finishing.

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"Providence."

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"Respectfully yours,

"GEORGE A. H. EGGERS."

NOTICE.

Photographers requiring the best and quickest working lenses in the world, please read the two-page advertisement of Benjamin French & Co., and send for price-lists. Lenses sent to any one, C.O.D., express to hold money one week for trial; if not satisfactory, money refunded.

FOR SALE.—Mammoth Camera; H. B. & H. make; with box and stand complete (if wanted); first-class, and perfect in all respects. Will sell cheap, having no further use for it, or exchange for stock or fine stereopticon apparatus.

Address C. FOLJAMBE,
171 Superior St., Cleveland, O.

FOR SALE.—The Lake Shore Studio, Skaneateles, N. Y. Population of the town about 4600; growing village; rich farming country; only gallery in town. With the increasing business prospects, this is a rare chance. If sold before April 1st, 1880, can be bought cheap.

For further particulars, address
O. H. WILDEY,
P. O. Box 43, Skaneateles, Onondaga Co., N. Y.

J. L. CLARK, Wm. F. HAAS.
CLARK & HAAS,

Sweep smelters, gold and silver refiners, assayers. Special attention paid to refinings of photographers' waste. No. 10 Fayette St., between 9th and 10th, below Arch St., Phila., Pa.

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Returns made in nitrate of silver or chemicals.

WANTED.—Photographic printer; one who can come well recommended. Address

D. H. ANDERSON, Richmond, Va.

SCOTFORD'S BROMO-GELATIN DRY PLATES.—Very reliable, very sensitive. For gallery use or viewing. J. H. SCOTFORD, Lansing, Mich.

FOR SALE.—An opportunity seldom offered, in a beautiful city of nearly 100,000 (one hundred thousand) inhabitants, one of the most complete galleries in the country; now doing a business of \$12,000 (twelve thousand dollars) per year. Books showing business for the past ten years can be examined. Address B. H. J., Care W. Phillippi, 733 Filbert St., Philadelphia.

PERFECTION VIGNETTES for the SOLAR CAMERA.—A full set, five sizes, sent by mail on receipt of price, \$2.50.

W. L. SHOEMAKER,
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Respectfully,
CHAS. W. STEVENS,
229 and 231 State St., Chicago.

WANTED.—To correspond with a good retoucher and printer; will furnish outfit. Can hear of a good interest by addressing

C. F. MOELK,
Care J. F. Ryder, 239 Superior St., Cleveland, O.

A BARGAIN.—The back volumes of the *Philadelphia Photographer* from 1864 (first vol.) to 1876 for sale in a lot. Also the *Photographic World* (vols. I. and II.) and *Photographic Mosaics*, from 1866 to 1873, inclusive, with several English year books. List of prices on application to

DAVID,
Care *Philadelphia Photographer*,

The Photographer to his Patrons.
The Great Advertising Medium
for Photographers. \$15 per 1000.
See Adv't.

JANUARY, 1879, and OCTOBER, 1879, PHILADELPHIA PHOTOGRAPHER WANTED.—Will exchange for current numbers or pay fifty cents each for them in books. Parties sending them may keep the pictures if they wish. We want the letter-press to make up volumes for our friends.

EDWARD L. WILSON, Photo. Publisher,
116 N. Seventh St., Philadelphia.

BACK VOLUMES OF THE PHILADELPHIA PHOTOGRAPHER FOR SALE.—Nicely bound, from Vol. 1. Also the *Photographic World*, Vols. 1 and 2. *Photographic Mosaics*, from No. 1, and a few year-books, and *British Journal Almanacs*. Having stopped working at my once beloved hobby, I want to sell out my books. Address

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Again takes the field with a host of *Winter Landscapes*, *Winter Cottages*, *Sleighs*, *Bridges*, *Snow-covered Rocks*, *Artificial Snow*, *Ice*, etc. Suitable for men, women, and children, standing, walking, sleighing, coasting, or skating, in clear weather or in storm.

Full instructions sent enabling any photographer to get up a *great snow-storm in five minutes*, even in warm weather.

A new sheet of reduced photographs, showing poses and various effects, also sent gratis with each Background.

Plain and Rich Modern Exteriors, Fire-places, Antique Cabinets, Bric-a-brac, Vases, Pitchers, Plaques, Papier Mache and Genuine Richly Carved Chairs, Children's Chairs, Stands, Japanese Screens, etc.

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LAFAYETTE W. SEAVEY,
No. 8 Lafayette Place. N. Y.

Studio established 1865.

GREAT BARGAINS.—We have some second-hand portrait and view lenses for sale, of nearly all sizes. To any one in want of a good lens, at low price, we will send list of all sizes we have.
BENJAMIN FRENCH & Co., Boston.

A GRAND OPPORTUNITY for making money, in the healthiest locality and finest climate in the United States. I have outside enterprises that demand my attention, and therefore offer a first-class business for sale—a fine Gallery, fitted up with every modern improvement, the finest instruments, and everything in best order. A business of \$5000 per annum, and possible increase of double that amount. Will sell at invoice. Address

H. L. BINGHAM,
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WAYMOUTH'S VIGNETTE PAPERS continue to be in great demand, such orders as the following from the trade are frequent:

"NEW YORK, Nov. 4, 1879.

"Please send us 3 dozen Waymouth's Vignette, each, Nos. 1, 4, 5, 17; 6 dozen each, Nos. 2, 3, 4, 6; 4 dozen each, Nos. 9, 11, 14; 4 dozen each, Nos. 13, 15, 16; 2 dozen, No. 10; 6 dozen, No. 15½, 'Ormsby pattern.'

"SCOVILL MANUFACTURING Co.
"419 & 421 Broome St."

FOR SALE.—A massive gilt frame, 7 inch moulding, plate glass 38 x 56, and containing fifty-six of Reilley's Views of the Yosemite Valley. Made for the Centennial Exhibition. Will make a splendid specimen frame. Can be seen at store of Edward L. Wilson, 116 N. 7th Street, Philadelphia; or address

J. J. REILLEY, San Francisco, Cal.

NEW LENS.

HARTFORD, CONN., April 4th, 1879.

MESSRS. B. FRENCH & Co.

After giving the "New Back Lens" a thorough trial, I find the average time of exposure reduced *one half*; while it exceeds the old lens both in sharpness, field, and depth of focus. I have now been a patron of your house twenty-seven years, and it affords me pleasure (for the sake of the fraternity as well as myself), to say that you have never engaged in the sale of ANY of the multitude of humbugs that have (so extensively) been in vogue. Photographers will more and more appreciate a house that rests firmly on the solid foundation of fidelity, truth, and integrity, and studies the PRACTICAL wants of its patrons.

Yours truly, H. J. RODGERS.

A FIRST-CLASS business opportunity is offered to a party with small capital and business capacity, in a gallery at the corner of two of the principal shopping streets in Philadelphia. Present owner is a superior crayon artist and negative retoucher. Call on the premises.

E. W. HEACKLE,

S. E. cor. Ninth and Arch Sts., Philada.

WILLIS'S PLATINUM PRINTING PROCESS.—C. GENTILE, representing WILLIS & CLEMENT, Proprietors of the Patents for the United States, is now in the West selling Rights.

Photographers wishing him to visit them in the Western, Southern or Northern States, will address

C. GENTILE,
Oakwood Boulevard, Chicago.

PHOTOGRAPHERS, ATTENTION!!—Unmounted Stereoscopic or Cabinet-size Views of Washington will be sent to any address on receipt of the following prices:

Two dozen,	\$1 00
Per gross,	4 50
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Printed with care on Dresden or Hovey's paper. Satisfaction guaranteed.

Negatives made for Photographers.

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NEGATIVES WANTED.—Of all the large cities of the United States, Canadas, and South America (stereoscopic size), Panoramas, Harbors, and Bridges only. Parties having new, unused negatives will do well to send proofs with prices. Would contract with a good photographer for making negatives. Address

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No charge for advertisements under this head; limited to four lines. Inserted once only, unless by request.

By a young lady, competent to do all sorts of negative retouching, or will do "job work" at her own home for the trade. Address Miss "L. Retoucher," 724 N. 19th St., Philadelphia.

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By a young lady, as retoucher, or reception-room attendant. Samples of retouching sent on application. Address E. L. H., Lock Box 1575, Janesville, Wis.

By a man who has been eleven years in the business, as operator or general worker. Eastern States, or New York State preferred; best of references given. James W. Norris, 15 Eaton St., Boston, Mass.

By a first-class operator, printer, toner, and dark-room man of long experience in first-class galleries, and can furnish good reference. Address I. C. Lee, Mahanoy City, Pa.

By a photographer of ten years' experience; willing to work; good reference given. Address C. F. Moelk, care J. F. Ryder, 239 Superior St., Cleveland, O.

By an artist, to do coloring in water colors, oil, ink, or retouching. Address G. J. Canfield, Canton, Ohio.

In some first-class gallery, as operator, retoucher, or printer; will furnish specimens of work, if necessary. None but those meaning business need apply. Address R. H. Mann, Photographer, Virginia, Ill.

By a young man, as operator or general assistant, in a good, reliable gallery; understands the art thoroughly. None but those meaning business need apply. Please state salary. Address B. B. B., Maysville, Ky., Mason Co.

By March 1st, 1880, in any, or all, branches of photography, by a man of twelve years' experience, who thoroughly understands the business; or would run a good gallery on shares. Address Box 33, Ovid, Seneca Co., N. Y.

As photographic printer, or dark-room operator, by a man of steady habits and an experience of over twenty years; can also retouch very finely; best of reference. Address H. H. Wilder, 51 Washington St., Boston, Mass.

After January 15th, by an unmarried man (twenty-three); artist in crayon, india-ink, and water colors; also first-class retoucher and printer, and fair operator. No objection to the West; salary moderate. Address B. J. Smith, Artist, 341 Sixth Avenue, New York.

HEARN'S PRACTICAL PRINTER, SECOND EDITION.

A complete Manual of Photographic Printing on Plain and Albumen Paper and on Porcelain.

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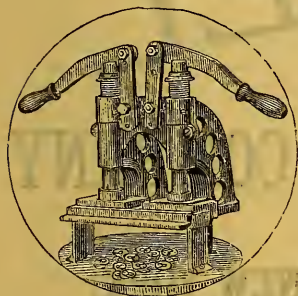
The Printing-room.	Printing the Bendann Back-grounds.	Further Treatment of the Prints after Printing.
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The Positive Bath for Albumen Paper.	A Few More Remarks about Printing--Treatment of Broken Negatives.	Cleaning the Porcelain Plates.
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	Waymouth's Vignette Papers.	Glaze Photographs.

Over 50 Wood Cuts and an elegant Panel Portrait by G. M. Elton, embellish it. Mailed, post-paid, on receipt of \$2.50, by any dealer, or

EDWARD L. WILSON, Photo. Publisher, 116 N. Seventh St., Philada.

Applegate's Pocket Portrait Machine

PATENTED, June 13, 1876. IMPROVED, April 3, 1877.



Five hundred thousand strong or
From early morn till late, [so,
Amongst the busy throng we go,
Looking for APPLEGATE.

For likenesses both rare and cheap
By new patent machines,
Giving the poor a chance as well
As those that have the means.



Cuts and incases a neat and ornamental picture for the pocket or mail, at a cost of five-eighths of one cent each. See cut, being the exact size of the picture. Any Gem camera will do to take them. Size of machine, about ten inches square; weight, less than 30 lbs. Handy for the counter; small children can incase their own pictures; requires no practice. Upwards of 250,000 of the portraits have been taken at the extensive galleries of Mr. Applegate, in Philadelphia. Price, with room right, \$40, C.O.D., or on receipt of P.O. order, including 200 specimens, enabling parties to commence operations immediately. Also, suitable Gem Cameras, furnished with six tubes, very low. Silver-plated rims, \$5 per 1000. Stock dealers supplied. Sample pictures sent by mail.

Caution to Infringers.—This is the original machine, invented for this purpose by J. R. APPLEGATE. It has been improved and patented, and all infringements on the same will be rigidly prosecuted.

FOR SALE BY

WILSON, HOOD & CO., Philadelphia Trade Agents.

PLATINUM ENLARGEMENTS

BY THE ELECTRIC LIGHT.

By the use of the Electric Light we have succeeded in making ourselves independent of sunshine, and are, therefore, enabled to execute promptly all orders which may be sent to us. Our Platinotype Enlargements are well known for their

Purity, Vigor, Half-tone, Color, and Absolute Permanence.

PRICE LISTS AND PARTICULARS MAY BE OBTAINED FROM

WILLIS & CLEMENTS, 17 East 17th St., New York.

N. B.—Ours is the only Electric Light used in the United States for this purpose.

THE

Willis Platinotype Process,

WILLIS & CLEMENTS, 17 East 17th St., New York,

PROPRIETORS FOR THE UNITED STATES.

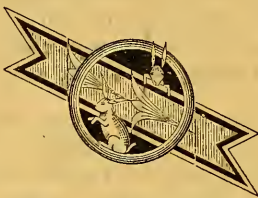
This is the *simplest* photographic process now in use. It is remarkable for its *rapidity* and the *certainty* of its results.

PLATINOTYPES ARE CHARACTERIZED BY A

Beautiful Tone, Perfection of Detail, Pure Whites, and Absolute Permanence.

Licenses to use the process issued, and all necessary materials supplied by the proprietors, from whom terms and detailed information may be obtained.

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MANUF'G  COMPANY

419 & 421 BROOME STREET, NEW YORK,

MERCHANTS IN

ALL ARTICLES PHOTOGRAPHIC

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SOLE AGENTS FOR

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THE GREATEST STOCK IN THE WORLD! DEALERS EVERYWHERE SUPPLIED LOW!

SCOVILL MANFG. CO., 419 & 421 Broome St., NEW YORK.

W. IRVING ADAMS, Agent.

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ADVERTISING RATES FOR SPECIALTIES.—It will be understood that matter under this head is not to be considered as always having editorial sanction, though we shall endeavor to clear it of anything tending to deceive or mislead. Stock-dealers will find this a beneficial mode of advertising, and sure to pay largely. Six lines, one insertion, \$2.00, and 25 cents for each additional line, seven words to a line—in advance. *Operators desiring situations, no charge.* Matter must be received by the 23d to secure insertion. Advertisers will please not ask us for recommendations. We cannot undertake to mail answers to parties who advertise. Please always add your address to the advertisement.

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THE WILLIS PROCESS.

Convinced of the permanency of the prints made by the Willis Platinum Process, I have purchased a license for my establishment.

On account of our splendid facilities and long experience in Solar Printing, we have already produced enlargements which the inventor, Mr. WILLIS, pronounces the finest he has ever seen.

We rest our case on this testimony.

If dark weather threatens to delay orders, we shall use the Electric Light for printing. Annexed are the rates for Platinotype Enlargements:

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" 20 x 24, "	2.50;	"	3.00
" 22 x 27, "	2.75;	"	3.50
" 25 x 30, "	3.00;	"	3.75
" 26 x 32, "	3.25;	"	4.00
" 29 x 36, "	4.50;	"	5.50
" 30 x 40, "	6 00;	"	7.25
" 35 x 45, "	7.75;	"	10.00
" 40 x 50, "	10.00;	"	13.00

BY THE SILVER PROCESS.

PLAIN OR ALBUMENIZED PAPER.

Size, 16 x 20,.....	\$1.50;	on strainers,.....	\$2.00
" 20 x 24,.....	2.00;	"	2.50
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WENDEROTH'S RESTORING PROCESS.—C. GENTILA, 70 Oakwood Boulevard, Chicago, is the sole agent for sale of rights to work it. GUTEKUNST, of Philadelphia, and KENT, of Rochester, say: "The results of WENDEROTH'S process, for restoring old, faded, and discolored photographs, are excellent and durable."

FOR SALE.—A gallery doing a real good business; will sell very cheap, as I must sell. This is a splendid chance for you if you want to come West. Am the only gallery in the county; population, 12,000. If you mean business, send for particulars; if not, don't, for I have no time to waste. Address "PHOTOGRAPHER,"

Box 10, Minneapolis, Ottawa Co., Kansas.

A RARE CHANCE.—A photograph gallery, of ten years' standing, built by one of the present owners, in a lively railroad town, is now offered for sale—not for "half its value," but for a reasonable price. The senior partner wishing to retire from the business, we have concluded to sell out entire.

We have always done a successful business, commanding almost the entire trade of a half dozen surrounding towns. No other gallery within twelve miles. The entire gallery is heated by a good furnace in basement. Skylight on first floor; Dalmeyer and Voigtlander instruments, and over three thousand of our latest and best negatives in envelopes. No tints made the last year. A carbon license for this county. The entire building, fixtures, and ground, 40 by 45 feet, only \$3000. No rent. Those wishing to purchase, upon sending a sample card of their work, will receive one of ours in return, and any additional information required. Address soon.

HOLCOMB & FRENCH,
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CARD.

STUDIO, 8 LAFAYETTE PLACE,
NEW YORK, January 19th, 1880.

To My PATRONS:

In view of the great demand for my productions during the past months of October, November, and December, a demand so great that I was unable to fill the orders promptly, I would earnestly request that Backgrounds and Accessories for the spring season be ordered as early as possible, say, from three to six weeks in advance of the time wanted for use.

I have made several designs especially adapted to that season, some of which will be recognized as *entirely new departures*.

Please accept my thanks for your patience and liberal patronage, and believe me, as in the past,
Yours at command,

LAFAYETTE W. SEAVEY.

FOR SALE.—A good Gallery in a town of 30,000 inhabitants; a complete outfit, and rent low; doing a good business; will sell cheap for cash. Only those meaning business need apply.

Address J. H. REYNOLDS,
Burlington, Iowa.

GALLERY FOR SALE.—Centrally located, in the thriving city of Grand Rapids, Mich., which has a population of 40,000, six railroads, many large manufactories, and is the business centre of western Michigan. Gallery is well stocked; has good light, gas, and water; two solar cameras (direct), and a good solar business for the trade. Will be sold with or without solars. Address

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Respectfully,

CHAS. W. STEVENS,

229 and 231 State St., Chicago.

FOR SALE—The Lake Shore Studio, Skaneateles, N. Y. Population of the town about 4600; growing village; rich farming country; only gallery in town. With the increasing business prospects, this is a rare chance. If sold before April 1st, 1880, can be bought cheap.

For further particulars, address

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P. O. Box 43, Skaneateles, Onondaga Co., N. Y.

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W. L. SHOEMAKER,

828 Wood Street, Philadelphia.

A BARGAIN.—The back volumes of the *Philadelphia Photographer* from 1864 (first vol.) to 1876 for sale in a lot. Also the *Photographic World* (vols. I. and II.) and *Photographic Mosaics*, from 1866 to 1873, inclusive, with several English year books. List of prices on application to

DAVID,

Care *Philadelphia Photographer*,

NOTICE.

Photographers requiring the best and quickest working lenses in the world, please read the two-page advertisement of Benjamin French & Co., and send for price-lists. Lenses sent to any one, C.O.D., express to hold money one week for trial; if not satisfactory, money refunded.

JANUARY, 1879, AND OCTOBER, 1879, PHILADELPHIA PHOTOGRAPHER WANTED.—Will exchange for current numbers or pay fifty cents each for them in books. Parties sending them may keep the pictures if they wish. We want the letter-press to make up volumes for our friends.

EDWARD L. WILSON, Photo. Publisher,

116 N. Seventh St., Philadelphia.

NEW LENS.

HARTFORD, CONN., April 4th, 1879.

MESSRS. B. FRENCH & Co.

After giving the "New Back Lens" a thorough trial, I find the average time of exposure reduced *one half*; while it exceeds the old lens both in sharpness, field, and depth of focus. I have now been a patron of your house twenty-seven years, and it affords me pleasure (for the sake of the fraternity as well as myself), to say that you have never engaged in the sale of ANY of the multitude of humbugs that have (so extensively) been in vogue. Photographers will more and more appreciate a house that rests firmly on the solid foundation of fidelity, truth, and integrity, and studies the PRACTICAL wants of its patrons.

Yours truly, H. J. RODGERS.

PHOTOGRAPHERS, ATTENTION!!—Unmounted Stereoscopic or Cabinet-size Views of Washington will be sent to any address on receipt of the following prices:

Two dozen,	. . .	\$1 00
Per gross,	. . .	4 50
Per 1000,	. . .	25 00

Printed with care on Dresden or Hovey's paper. Satisfaction guaranteed.

Negatives made for Photographers.

RANALD DOUGLAS,

819 Market Space, Washington. D. C.

NEGATIVES WANTED—Of all the large cities of the United States, Canadas, and South America (stereoscopic size), Panoramas, Harbors, and Bridges only. Parties having new, unused negatives will do well to send proofs with prices. Would contract with a good photographer for making negatives. Address

EDWARD L. WILSON,

116 N. Seventh St., Philadelphia.

EXCHANGE COLUMN.

To accommodate those who have old apparatus, etc., to EXCHANGE (not sell), we offer to insert advertisements in this column at the low rate of 15 cents per line (of seven words), or fraction of a line. It will be found a cheap and helpful way of "unloading" useless articles about your studio for better ones. Cash to accompany all advertisements.

SITUATIONS WANTED.

No charge for advertisements under this head; limited to four lines. Inserted once only, unless by request.

By a young lady, as retoucher, and will also take charge of reception-room. Good reference given. Destination preferred, in the State of Ohio. Address Miss Rachel Dickinson, Fostoria, Seneca Co., O.

By a young man, with steady habits, as general assistant in the photographic business; three years' experience. Address J. E. Thoman, Bridgeport P.O., Ontario.

By a first-class operator and printer of long experience; single; reference if required. Address C. H. Irish, Adrian, Mich.

By March 1st, 1880, in any, or all, branches of photography, by a man of twelve years' experience, who thoroughly understands the business; or would run a good gallery on shares. Address Box 33, Ovid, Seneca Co., N. Y.

By a first-class printer and toner; two years with last employer in leading city gallery. Moderate wages; good reference. Address Artist, Box 180, Wattsburg, Erie Co., Pa.

By an experienced photographer, who is about selling out his business, in Ingersoll, Canada, as operator and retoucher; prepared to give the best of references; married. None need apply but those who mean business. Address C. M. Howell, Lock Box 95, Ingersoll, Canada.

In a gallery as general assistant. Address Lock Box 68, Waynetown, Ind.

By a young, sober, and energetic man, as printer, toner, or as general assistant, in a first-class gallery; first-class reference given. Address F. P., 24 Tappan St., Rochester, N. Y.

As operator or general assistant; twenty years' experience in all branches in Europe and this country; first-class outdoor work; good printer, and fair retoucher; or would run a gallery; no objection to travel. Address K. T. W., care of this office.

By a young man, as general assistant, in a first-class gallery; wages not so much of an object as improvement; best of reference given. Address R. S. Jarvis, Valparaiso, Ind.

By an A1 photographer (strictly so), well up in the detail and general manipulation, in some healthful city in South or Central America. Address Operator, 604 Capp St., San Francisco. Highest testimonials, etc.

By a young man of good habits, who is a good retoucher, printer, and toner, and can do general work about a gallery; the best of references given. Address F. S. Randall, Fulton, Oswego Co., N. Y.

By a young lady, in a photograph gallery, where a thorough knowledge of the business may be had; has been practising for two years; is willing to make herself generally useful; any place in the North or East preferred. Address C. F., Box 96, Gonzales, Texas.

As first-class operator; have had fifteen years' experience, and am competent to take charge of any department; can give the best of reference; have been doing the operating in the leading gallery in this city for the past two years. Address S. D. Wager, Indianapolis, Ind.

An operator, whose present engagement in Boston ends February 15th, wishes to make a change; is competent as an operator and retoucher, and has had charge of three first-class galleries. Address Operator, care of Carrier 31, Boston, Mass.

ENLARGEMENTS

Received Highest Medal and Award at the Centennial.

ARTIFICIAL PRINTING, SOLAR PRINTING, ON PAPER OR CANVAS.

Work guaranteed as to quality and durability.  **NO DELAY.** SEND FOR CIRCULAR AND PRICES.

CHAS. PAXSON & BRO.,
No. 612 BROADWAY, NEW YORK.

The Sorrento Card Frame.

IMITATION OF HOLLY WOOD DECORATED.

A substitute for the old-fashioned Tin-Type Envelopes and Holders.

The **SORRENTO** is made of Heavy Bristol Board and decorated in a neat, tasty manner, as shown in the cut.

Just the thing to deliver Tin-Types and other pictures to customers in. The use of this little frame will certainly *increase* the trade of Photographers who "present customers with a frame with each picture."

A perfect imitation of **HOLLY WOOD**. Is made only card size, with square opening, at present. Will be made soon with Arch Top and Oval Openings—also assorted styles of decoration.



Size of opening $2\frac{1}{2} \times 3\frac{1}{4}$.

A NEAT LITTLE CARD FRAME
FOR ONE CENT EACH.

USE THE SORRENTO CARD FRAME INSTEAD OF ENVELOPES.

Put up in package of 100, in boxes of 500 each.

Price, per 1000, - - - - - \$10.00.

FOR SALE BY

HIRAM J. THOMPSON,

MANUFACTURERS' AGENT FOR THE U. S. AND CANADAS,

DEALER IN

PHOTOGRAPHIC MATERIALS, PICTURE FRAMES, ETC.,

259 WABASH AVENUE, CHICAGO.

FOR SALE BY ALL DEALERS.

HANCE'S — SPECIAL — SPECIALTIES.

1 Anderson's Portrait Collodion.

This is especially a *Winter Collodion*, and guaranteed to work with the loveliest harmony, and the most exquisite softness, and freedom from all the *winter* troubles which Photographic Collodion is heir to. None genuine unless the signature of *Elbert Anderson*, the great dark-room operator, author, etc., is pasted over the cork of the bottle.

2 Ground Glass Substitute.

Is an indispensable article in the photographic gallery. There are so many uses to which it can be applied that a photographer having once given it a trial, will never be without it, as there is nothing known that will take its place.

The substitute is in the form of a varnish, is flowed and dried the same as varnish, but dries with a granulated or ground-glass surface.

For Vignette Glasses.

- " a Retouching Varnish.
- " Softening Strong Negatives.
- " the Celebrated Berlin Process.

For Ground Glass for Cameras.

- " Glazing Sky and Side Lights.
- " Obscuring Studio and Office Doors.
- " Printing Weak Negatives.

All imitators have given it up. They can't make it. GIVE IT A TRIAL.

PRICE 50 CENTS PER BOTTLE.

3 Hance's Delicate Cream Gun Cotton Is the King Cotton, and has no peer.

Prepared with particular care, warranted free from acid, and very soluble. It has made its way steadily and surely into most of the principal galleries in the country, where parties prefer to make their own collodion, and its superior qualities are shown in the medals awarded at the Centennial, Vienna, and Paris Exhibitions for photographs made with collodion in which it was used.

It is especially adapted to the Rembrandt style, and light drapery. Its sensitiveness renders it particularly adapted for children or any work that requires short exposure, though admirable as well for all work.

PRICE 80 CENTS PER OUNCE.

FOR SALE BY ALL STOCK-DEALERS.

NO RETAIL ORDERS FILLED. ORDER OF YOUR DEALER.

ALFRED L. HANCE, Philadelphia.

Specialties.

ADVERTISING RATES FOR SPECIALTIES.—It will be understood that matter under this head is not to be considered as always having editorial sanction, though we shall endeavor to clear it of anything tending to deceive or mislead. Stock-dealers will find this a beneficial mode of advertising, and sure to pay largely. Six lines, one insertion, \$2.00, and 25 cents for each additional line, seven words to a line—in advance. *Operators desiring situations, no charge.* Matter must be received by the 23d to secure insertion. Advertisers will please not ask us for recommendations. ~~We~~ We cannot undertake to mail answers to parties who advertise. Please always add your address to the advertisement.

CHANGE OF NAME AND FIRM.

ROCKWOOD SOLAR PRINTING CO.

SUNLIGHT AND ELECTRICITY!

GEO. G. ROCKWOOD, GEO. H. ROCKWOOD,
President. Superintendent.


J. AUGUSTUS RANDEL, *Business Manager.*

The sudden and large increase of the Solar Printing Department of my business necessitated a radical, separate, and complete reorganization of the Department. GEORGE G. ROCKWOOD.

The above-named parties have now organized under the title of the ROCKWOOD SOLAR PRINTING COMPANY, with every possible facility for the prompt execution of orders in the way of enlargements.

All of our new Solar Cameras are to be completed and in place by February 23d, under a penalty of five dollars a day for each day's delay.

Our Electric Lights, one for printing and one for copying, are promised about the same time. So, before this reaches the fraternity, we hope to be ready to complete all orders within twenty-four hours, if necessary.

 PLATINUM AND SILVER PRINTS AT THE SAME PRICES.

New and Lower Price-list.

Size.	Unmounted.	Mounted.
11 x 14 and under.....	\$1 00.....	\$1 50
13 x 16 }	1 50.....	2 00
14 x 17 }		
16 x 20 }		
18 x 22.....	1 75.....	2 25
20 x 24.....	2 00.....	2 50
22 x 27 }	2 50.....	3 00
25 x 30 }		
26 x 32.....	3 00.....	3 75
29 x 36.....	4 00.....	5 00
30 x 40.....	5 00.....	6 00
35 x 45.....	6 00.....	7 50
40 x 50.....	8 00.....	10 00

SPECIAL NOTICE.—As so much depends upon the good printing qualities of a solar negative,

we will make solar negatives from copies *without charge*, if the originals are sent to us with the orders for enlargements.

All orders must be accompanied by the cash. Make all P. O. orders payable to

"ROCKWOOD SOLAR PRINTING COMPANY,"
17 Union Square, New York.

JANUARY, 1879, AND OCTOBER, 1879, PHILADELPHIA PHOTOGRAPHER WANTED.—Will exchange for current numbers or pay fifty cents each for them in books. Parties sending them may keep the pictures if they wish. We want the letter-press to make up volumes for our friends.

EDWARD L. WILSON, Photo. Publisher,
116 N. Seventh St., Philadelphia.

GOOD NEWS FROM THE WONDERFUL EURYSCOPE.

F. E. Stanley, of Auburn, Me., writes: "I have tested the No. 3 EurySCOPE, and find that it works much quicker than I expected. I can make negatives under my light in twenty seconds, *perfectly satisfactory.*"

J. H. Lloyd, Waterford, N. Y., writes: "The No. C EurySCOPE I like very much; the only fault, a little slow. I make negatives with it in twenty-five seconds."

Gurly & Harris, of Utica, N. Y., write: "The No. 3 EurySCOPE gives perfect satisfaction, and exceeds all our expectations."

F. L. Stuber, of Easton, Pa., writes: "Please accept my thanks for sending me such a fine lens (EurySCOPE). I must say that it is by far the most valuable lens a photographer can have."

J. H. Seotford, of Lansing, Mich., writes: "Having used the No. C EurySCOPE for over ten months, I want to thank you for introducing to us photographers so valuable an instrument. It surprises me more and more as I use it."

VOIGTLANDER & SON'S NEW BACK-LENS,
AND WHAT THEY SAY OF IT.

Theo. Lilienthal, of New Orleans, writes: "The No. 3 New Back-lens gives entire satisfaction."

Forrester Clark, of Pittsfield, Mass., writes: "The new back-lens for my No. 3b gives complete satisfaction, and works in one-third less time than the old one."

Frank E. Stanley, of Auburn, Me., writes: "The new back-lens for my No. C Voigtlander works finely and quick. I am delighted with it."

Peterson & Brother write: "The new back-lens for our No. 3a Voigtlander we find extremely useful, and, indeed, necessary, when quick work is required, as it shortens the time of exposure materially."

Lenses sent to any one on trial.

BENJ. FRENCH & Co.

INSTITUTE OF NEGATIVE AND POSITIVE
RETOUCHING.

BARTHOLD MEYER, 182 S. CLARKE ST., CHICAGO.

REFERENCES.

Kurtz, } Sarony, }	NEW YORK.	Brand, Rocher, Mosher, Beebe, }	CHICAGO.
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Instructions given to
advanced students.

WOODWARD'S IMPROVED SOLAR CAMERAS, including the \$60 GEM, are made only in Baltimore, Md. They work rapidly on albumen or plain paper, as clear and sharp as by contact. Send for descriptive price-list.

D. A. WOODWARD,
Baltimore, Md.

MCLEOD'S GALLERY FOR SALE.—One of the best in northern Illinois, the leading gallery in the county. Located in Sterling, a beautiful town of 8000 inhabitants. This offer is open until the first of March. Good reasons for selling. For particulars, address

D. MCLEOD, Sterling, Ill.

P. S.—For cards, \$4 per dozen; cabinets, \$7 per dozen.

WANTED—A first-class retoucher. One who is really first class and can work quick, will hear of a situation with steady employment by addressing

WILSON, HOOD & Co.,
825 Arch St., Philadelphia.

CRAYON AND RETOUCHING ARTIST FOR THE TRADE.—Mr. Pern (German), No. 271 S. Third Street, Philadelphia, Pa., offers his services to the trade. Best quality of work guaranteed.

FOR SALE.—The leading gallery in Providence, R. I. (the Jones Gallery). The largest and best appointed in the city; and for convenience, situation, and arrangement, second to none in New England. No establishment in the city can show a better first-class trade. This gallery is up one flight, has two large operating-rooms, with side- and top skylights (one ground, the other plain glass), *complete in apparatus and accessories*. The reception room *large and handsomely furnished*.

Providence has a population of 100,000 (one hundred thousand). Best of prices for nice work. This is a fine opportunity for an enterprising man. For sale on account of health. Terms low for cash. For further particulars, address

BENJ. F. JONES,

357 Westminster St., Providence, R. I.

GALLERY FOR SALE.

The finest, best constructed and arranged gallery in northern New England; located in the beautiful village of Montpelier, Vt. (the capitol of the state). This gallery was built under my special directions and supervisions. Has a pure and unobstructed north light—top and side. In a new and handsome brick block, and best location in town. Skylight room, 36 feet long by 16 feet wide. Has been opened fifteen months, doing the *very best work* and getting *good prices*. I offer it for sale because I have another gallery at St. Johnsbury, and my health will not permit me to look after this. The above truly offers the *best opportunity* to obtain a *first-class* gallery, in a wealthy and appreciative community, and at a small outlay of capital. Lambert's exclusive license in carbon can be had if desired (carbon is established here, and many orders are received). Terms cash. For further particulars and information, address,

D. A. CLIFFORD, Prop'r., St. Johnsbury, Vt.

WENDEROTH'S RESTORING PROCESS.—C. GENTILE, 70 Oakwood Boulevard, Chicago, is the sole agent for sale of rights to work it. GUTKUNST, of Philadelphia, and KENT, of Rochester, say: "The results of WENDEROTH'S process, for restoring old, faded, and discolored photographs, are excellent and durable."

FOR SALE.—A gallery, well located and established; doing a profitable business in Utica, N. Y. The gallery is well stocked, and arranged for a first-class establishment. Will be sold right to the right man. You have only to see the place to like it. Address

A. B. GARDNER, Utica, N. Y.

To the Editor of the Philadelphia Photographer.

DEAR SIR: In the last number of your journal, in an article headed "Solar Printing by Artificial Light," we notice that you allude to the use of the Electric Light by a well known photographer in this city for the purpose of making photographic enlargements, and describe him as the "exception" who "has not faltered" at the expense attendant upon its use.

As we, ourselves, are the first and, so far, the only experimenters who have successfully adapted the Electric Light to this use, we feel justified in asking you to correct this mistake, and to publish our statement that we have the only Electric Light now in use in this country for the purpose of making photographic enlargements.

Yours truly, WILLIS & CLEMENTS.

NEW YORK, February 3d, 1880.

PHOTO. CAR FOR SALE, at one half its present value; first-class condition; platform springs, etc. Address

JONES & Co.,

516 S. 3d Street, Philadelphia.

WANTED—A first class photograph artist who can manipulate every branch, including view-ing. Address

CHAS. A. DEAN,

37 State St., Sycamore, Ill.

CARD.

STUDIO, 8 LAFAYETTE PLACE,

NEW YORK, January 19th, 1880.

TO MY PATRONS:

In view of the great demand for my productions during the past months of October, November, and December, a demand so great that I was unable to fill the orders promptly, I would earnestly request that Backgrounds and Accessories for the spring season be ordered as early as possible, say, from three to six weeks in advance of the time wanted for use.

I have made several designs especially adapted to that season, some of which will be recognized as *entirely new departures*.

Please accept my thanks for your patience and liberal patronage, and believe me, as in the past,

Yours at command,

LAFAYETTE W. SEAVEY.

NOTICE.

Photographers requiring the best and quickest working lenses in the world, please read the two-page advertisement of Benjamin French & Co., and send for price-lists. Lenses sent to any one, C.O.D., express to hold money one week for trial; if not satisfactory, money refunded.

GREAT BARGAINS.—We have some second-hand portrait and view lenses for sale, of nearly all sizes. To any one in want of a good lens, at low price, we will send list of all sizes we have.

BENJAMIN FRENCH & Co., Boston.

NOTICE.

TO THE FRIENDS AND PATRONS OF THE "GREAT CENTRAL" PHOTOGRAPHIC WAREHOUSE.

Having decided to retire from active business, I take great pleasure in presenting my successors, Messrs. Gayton A. Douglass and Henry G. Thompson, who will serve you under the firm name of DOUGLASS, THOMPSON & Co.

These gentlemen have been identified with my business for the past ten years, and enjoy the fullest confidence of the trade.

Thanking the fraternity who have been so generous with their support in the past, I ask for my successors the same liberal treatment, satisfied that you will be served in the most acceptable manner.

Respectfully,

CHAS. W. STEVENS,

229 and 231 State St., Chicago.

J. L. CLARK,

WM. F. HAAS.

CLARK & HAAS,

Sweep smelters, gold and silver refiners, assayers. Special attention paid to refinings of photographers' waste. No. 10 Fayette St., between 9th and 10th, below Arch St., Phila., Pa.

References: Wm. H. Rhoads, artist-photographer, Phila.; Messrs. Schreiber & Sons, photographers, Phila.; H. M. Clifford, photographer, Phila.

Returns made in nitrate of silver or chemicals.

PERFECTION VIGNETTES for the SOLAR CAMERA.

—A full set, five sizes, sent by mail on receipt of price, \$2.50.

W. L. SHOEMAKER,

828 Wood Street, Philadelphia.

NEGATIVES WANTED—Of all the large cities of the United States, Canadas, and South America (stereoscopic size), Panoramas, Harbors, and Bridges only. Parties having new, unused negatives will do well to send proofs with prices. Would contract with a good photographer for making negatives. Address

EDWARD L. WILSON,

116 N. Seventh St., Philadelphia.

FOR SALE—Direct printing Solar (Woodward), low for cash; 29 x 36. A. MARSHALL,

147 Tremont St., Boston, Mass.

SCOTFORD'S BROMO-GELATIN DRY PLATES.—Very reliable, very sensitive. For gallery use or viewing. J. H. SCOTFORD, Lansing, Mich.

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To accommodate those who have old apparatus, etc., to EXCHANGE (not sell), we offer to insert advertisements in this column at the low rate of 15 cents per line (of seven words), or fraction of a line. It will be found a cheap and helpful way of "unloading" useless articles about your studio for better ones. Cash to accompany all advertisements.

SPRING BARGAINS.—A useful invention needed in every family. It is just the thing for those wishing to change business. I will exchange whole interest or part for photo. galleries, photo. goods, and any good personal property and real estate clear of all incumbrances. Answer what have you. Address,

P. O. Box, 87,
Northumberland, Pa.

SEAVEY'S grounds, also some surplus lenses.
T. H. HIGGINS, Wheeling, W. Va.

SEPTEMBER, 1879, copies of this magazine are wanted to make up sets. 50 cents each, will be given in books by E. L. Wilson, Philadelphia.

WANTED.—To give first-class negatives of Washington, D. C., for first-class second-hand view lenses. Proofs free to all in earnest.

RANALD DOUGLAS,
819 Market Space, Washington, D. C.

SITUATIONS WANTED.

No charge for advertisements under this head; limited to four lines. Inserted once only, unless by request.

By a young man, as printer or general man in a good gallery. Address Box 86, Brandon, Wis.

By a first class negative retoucher, printer, and toner and assistant operator; is desirous of furthering himself in operating; highest possible recommendations as to ability and character; wages low, and permanency desired. Address, Photographer, Box 208, Brockville, Ontario, Canada.

A first-class retoucher, india ink, crayon, and water color artist would like a situation in some photograph gallery; can also manage reception room; desire twelve dollars a week; best of reference. Address, M. S. B., Box 50, Peabody, Mass.

By a young man, 7 years' experience as printer and toner. Address, William McMahon, care of C. S. Roshon, 408 Market St., Harrisburg.

A young man wishes a situation in a gallery where all kind of work is made. Has been in a gallery about ten months; can give good recommendations. Address Myron C. Thomas, 1230 North Twelfth Street, Philadelphia.

By a young man, good operator; can do general gallery work; prefer Nebraska or Dakota; will, for moderate salary, make stereoscopic view negatives in Dakota, for some publishing house. Address F. H. A., Box 366, Cedar Falls, Ia.

An artist who thoroughly understands finishing photographs, from miniature to life-size, in india ink, water colors or crayon, wishes an engagement; five years experience in the largest copying establishment in New England. Address S. R. J., Box 1669, Concord, N. H.

By a young man, a situation as assistant dark-room man or printer in a first-class gallery. Address J. M. Bossert, 238 Madison St., Philad'a.

By a good printer and toner, or can do most any kind of work around a gallery; good reference; for the last two years printer and toner at H. McMichael's gallery, 246 Main St., Buffalo, N. Y. Address N. McDannell, Wattsburgh, Erie Co., Pa.

An artist of excellent reputation as a crayonist, india-ink finisher, water colorist, retoucher, etc., would like a situation in a photographic art gallery; good reference if desired. Direct all correspondence to M. S. Bancroft, Peabody, Mass.

By a practical printer, toner, and general assistant; can speak both English and German. Address Photographer, 19 N. 23d St., LaFayette, Ind.

By a first-class artist, in water colors, oil, india ink, crayons, and retouching. Address G. J. Canfield, Canton, Ohio.

As printer and toner. Please address, J. D. Davis, 12 Gardener St., Providence, R. I.

ENLARGEMENTS

Received Highest Medal and Award at the Centennial.

ARTIFICIAL PRINTING, SOLAR PRINTING, ON PAPER OR CANVAS.

Work guaranteed as to quality and durability.  **NO DELAY.** SEND FOR CIRCULAR AND PRICES.

CHAS. PAXSON & BRO.,

No. 612 BROADWAY, NEW YORK.

**WILSON'S
DISSOLVING
TRANSFORMATIONS
FOR THE
LANTERN**

EDWARD L. WILSON, MFR **116 N. 7TH ST. PHILADA.**

The Most Astonishing Effects Ever Produced in the Lantern.

Have One or More of them. See list below, and consult our Supplementary Catalogue.

Flight of Mercury.

Journey of Aurora.

Flying Time.

Birth of the Water

Babies.

The World.

Tour with the Goddesses.

The Pigtail Comedy.

Tragedy among the

Pigtails.

Hebe's Revenge on Cupid.



Girl and Butterfly.

Little Bird-Catcher.

The Resurrection.

7 Stages of Girlhood.

7 Periods of Young

America.

Noted Women of the

Bible.

Statuary-Curtain and

Pedestal.

ALL ARE OUR OWN INVENTION AND MANUFACTURE.

Magic Lantern Slides, Lanterns, and Appliances.

G. GENNERT

38 Maiden Lane, New York

IMPORTER OF THE CELEBRATED

S. & M. DRESDEN Albumen Papers

SINGLE OR EXTRA BRILLIANT.

This paper was the first extra brilliant imported into this country ten years ago, and has retained its superior quality above all other brands sprung up since, to which the constantly increasing demand testifies.

ALSO,

Hyposulphite of Soda,

Sulphate of Iron,

Solid German Glass Baths,

Saxe Evaporating Dishes,

French Filter Paper,

Porcelain Trays.

Ferrotypes Plates.

I ALSO IMPORT
EXTRA BRILLIANT

CROSS-SWORD PAPER.

FOR SALE BY ALL STOCK-DEALERS.

OR, G. GENNERT, Importer, 38 Maiden Lane, N. Y.

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CHANGE OF NAME AND FIRM. ROCKWOOD SOLAR PRINTING CO. SUNLIGHT AND ELECTRICITY!

GEO. G. ROCKWOOD, GEO. H. ROCKWOOD,
President. Superintendent.


J. AUGUSTUS RANDEL, *Business Manager.*

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"ROCKWOOD SOLAR PRINTING COMPANY,"
17 Union Square, New York.

CONE-BELLOWS VIEW CAMERA-BOX, for plates 14 x 17 down, for sale cheap. It is as good for use as a new one, and is of the American Optical Company's best make. Has been very little used.

H. C. BRIDLE & Co.,
1018 Wood St., Philadelphia.

WANTED.—An operator; one who would make himself generally useful, either at viewing, photographs, portraits, and tintypes, for the months of July and August. Any one requiring relaxation during the hot months, from city life, would find this a rare chance. Must be of steady habits, with good reference, and samples of work required. State salary required. Apply to

A. C. MCINTYRE,
1000 Island Studio, Brockville, Ont.

Seavey's Spring Backgr'ds & Accessories.

FOR SALE.—An opportunity seldom offered, in a beautiful city of nearly 100,000 (one hundred thousand) inhabitants, one of the most complete galleries in the country; now doing a business of \$12,000 (twelve thousand dollars) per year. Books showing business for the past ten years can be examined. Address B. H. J.,

Care W. Phillippi,
733 Filbert St., Philadelphia.

WANTED.—A first-class retoucher and dark-room man. One that is first-class in the above departments can secure a good situation. Address

B. M. CLINEDINST,
66 Lexington St., Baltimore.

PHOTOGRAPH GALLERY FOR RENT IN OMAHA, NEBRASKA.—The rooms are specially and nicely fitted up for the business, with all the late improvements. For particulars, address

L. B. WILLIAMS & SON,
1422 & 1424 Dodge St., Omaha, Nebraska.

CHEAP TO BUY.—One pair lanterns, without dissolving attachments (they have been used singly), 5 inch condensers; one sheet, 25 x 30; one sheet, 18 x 20: one frame (folding), for hall use; three rubber bags; one hydrogen generator, retort, and wash-bottle; twenty-five *fine colored slides*, wooden carriers; two hundred assorted slides (about half Levy and Woodbury), all good; one reflector, for throwing calcium light on street.

\$100 will buy the whole outfit, if applied for at once. Address

EUGENE A. BORDEN,
Fall River, Mass.

Seavey's Spring Backgr'ds & Accessories.

A FIRST-CLASS ARTIST in oil, who has studied his art in Italy, desires to escape the "London fog," and form an engagement with some party in America. He is thought to be rapid, bold, brilliant, and accurate in his portraits. Photo-transfers a specialty. Only a first-class connection desired. Address G. WICHEL,

Care Patti & Co., 27 Ivy Lane, London, Eng.

A MAN OF REAL ABILITY, as operator and positionist, who must be a man of genteel address and steady habits as well, can find a permanent situation in a first-class gallery by addressing "PROPRIETOR," care of this office.

JANUARY, 1879, AND OCTOBER, 1879, PHILADELPHIA PHOTOGRAPHER WANTED.—Will exchange for current numbers or pay fifty cents each for them in books. Parties sending them may keep the pictures if they wish. We want the letter-press to make up volumes for our friends.

EDWARD L. WILSON, Photo. Publisher,
116 N. Seventh St., Philadelphia.

NEGATIVES WANTED—Of all the large cities of the United States, Canada, and South America (stereoscopic size), Panoramas, Harbors, and Bridges only. Parties having new, unused negatives will do well to send proofs with prices. Would contract with a good photographer for making negatives. Address

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BENJ. FRENCH & Co.

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WOODWARD'S IMPROVED SOLAR CAMERAS, including the \$60 GEM, are made only in Baltimore, Md. They work rapidly on albumen or plain paper, as clear and sharp as by contact. Send for descriptive price-list.

D. A. WOODWARD,
Baltimore, Md.

SCOTFORD'S BROMO-GELATIN DRY PLATES.—Very reliable, very sensitive. For gallery use or viewing. J. H. SCOTFORD, Lansing, Mich.

FOR SALE.—The leading gallery in Providence, R. I. (the Jones Gallery). The largest and best appointed in the city; and for convenience, situation, and arrangement, second to none in New England. No establishment in the city can show a better first-class trade. This gallery is up one flight, has two large operating-rooms, with side- and top skylights (one ground, the other plain glass), *complete in apparatus and accessories*. The reception room large and handsomely furnished.

Providence has a population of 100,000 (one hundred thousand). Best of prices for nice work. This is a fine opportunity for an enterprising man. For sale on account of health. Terms low for cash. For further particulars, address

BENJ. F. JONES,

357 Westminster St., Providence, R. I.

Seavey's Spring Backgr'ds & Accessories.

GALLERY FOR SALE.

The finest, best constructed and arranged gallery in northern New England; located in the beautiful village of Montpelier, Vt. (the capitol of the state). This gallery was built under my special directions and supervisions. Has a pure and unobstructed north light—top and side. In a new and handsome brick block, and best location in town. Skylight room, 36 feet long by 16 feet wide. Has been opened fifteen months, doing the *very best work* and getting *good prices*. I offer it for sale because I have another gallery at St. Johnsbury, and my health will not permit me to look after this. The above truly offers the *best* opportunity to obtain a *first-class* gallery, in a wealthy and appreciative community, and at a small outlay of capital. Lambert's exclusive license in carbon can be had if desired (carbon is established here, and many orders are received). Terms cash. For further particulars and information, address,

D. A. CLIFFORD, Prop'r., St. Johnsbury, Vt.

FOR SALE.—A gallery, well located and established; doing a profitable business in Utica, N. Y. The gallery is well stocked, and arranged for a first-class establishment. Will be sold right to the right man. You have only to see the place to like it. Address

A. B. GARDNER, Utica, N. Y.

INSTITUTE OF NEGATIVE AND POSITIVE RETOUCHING.

BARTHOLOMEW MEYER, 182 S. CLARKE ST., CHICAGO.

REFERENCES.

Kurtz, } Sarony, }	NEW YORK.	Brand, Roche,	} CHICAGO.
Instructions given to advanced students.		Mosher, Beebe,	

CRAYON AND RETOUCHING ARTIST FOR THE TRADE.—Mr. Pern (German), No. 271 S. Third Street, Philadelphia, Pa., offers his services to the trade. Best quality of work guaranteed.

NOTICE.

Photographers requiring the best and quickest working lenses in the world, please read the two-page advertisement of Benjamin French & Co., and send for price-lists. Lenses sent to any one, C.O.D., express to hold money one week for trial; if not satisfactory, money refunded.

GREAT BARGAINS.—We have some second-hand portrait and view lenses for sale, of nearly all sizes. To any one in want of a good lens, at low price, we will send list of all sizes we have.

BENJAMIN FRENCH & Co., Boston.

Seavey's Spring Backgr'ds & Accessories.

J. L. CLARK, WM. F. HAAS.

CLARK & HAAS,

Sweep smelters, gold and silver refiners, assayers. Special attention paid to refinings of photographers' waste. No. 10 Fayette St., between 9th and 10th, below Arch St., Phila., Pa.

References: Wm. H. Rhoads, artist-photographer, Phila.; Messrs. Schreiber & Sons, photographers, Phila.; H. M. Clifford, photographer, Phila.

Returns made in nitrate of silver or chemicals.

PERFECTION VIGNETTES for the SOLAR CAMERA.

—A full set, five sizes, sent by mail on receipt of price, \$2.50.

W. L. SHOEMAKER,

828 Wood Street, Philadelphia.

EXCHANGE COLUMN.

To accommodate those who have old apparatus, etc., to EXCHANGE (not sell), we offer to insert advertisements in this column at the low rate of 15 cents per line (of seven words), or fraction of a line. It will be found a cheap and helpful way of "unloading" useless articles about your studio for better ones. Cash to accompany all advertisements.

ONE 4-4 Camera to exchange for an 8 x 10 back-ground. J. W. McLELLAN, Valparaiso, Ind.

SEPTEMBER, 1879, copies of this magazine are wanted to make up sets. 50 cents each, will be given in books by E. L. Wilson, Philadelphia.

FOR 1880.—Real estate, photograph galleries, photograph stock, pianos, organs, gold watches, silver watches,—any property clear of all incumbrance, or cash,—will buy a good business. Address
"BUSINESS,"
Box 87, Northumberland, Pa.

WANT TO EXCHANGE.—A first-class view wagon for extra 4-4 portrait lens; a 9-inch Weston burnisher for a larger size; Seavey interior, 8½ x 10 ground, for one equally good, of different design.
J. HALL,
Great Barrington, Mass.

SEAVEY'S "Eastlake Interior Background," Seavey's "Bogardus Garden Seat," Seavey's large P. M. Rock. Will exchange for Seavey boat, and other Seavey backgrounds and accessories. One fine Voigtlander view lens, for 11 x 14 plate, and patent dark-tent. Will exchange for a fine 4-4 portrait lens, and 5 x 8 view lens.
FRANK ROBBINS,
Oil City, Pa.

WANTED.—To give first-class negatives of Washington, D. C., for first-class second-hand view lenses. Proofs free to all in earnest.

RANALD DOUGLAS,
819 Market Space, Washington, D. C.

WANT to change side-slips. Photos exchanged.
F. M. Rood, Poultney, Vermont.

WANTED.—To exchange an 8 x 10 multiplying box, with 4½ Darlot tubes (all in good order), for a 5 x 8 stereo box and tubes. Address

F. H. HOLLIS,
Hackettstown, Warren Co., N. J.

SITUATIONS WANTED.

No charge for advertisements under this head; limited to four lines. Inserted once only, unless by request.

By a first-class printer and toner, where he can make himself generally useful. Seven years in the business; age 23; wages, \$6 per week, and board. Address George Anson, care *Philadelphia Photographer*.

By a man of experience in all departments of photography, and who can furnish good recommendation. Address A. A. Baldwin, Ludlow, Vt.

As printer or toner; am fully competent to do either; can also mount, spot, coat plates, etc. Address J. D. Davis, 12 Gardener Street, Providence, R. I.

By a young man, 7 years' experience as printer and toner. Address, William McMahon, care of C. S. Roshon, 408 Market St., Harrisburg.

In a first-class gallery, as printer or retoucher; has had ten years' experience in all its branches. Address Charles E. Van, Auburn, N. Y.

PLATINUM ENLARGEMENTS

BY THE ELECTRIC LIGHT.

By the use of the Electric Light we have succeeded in making ourselves independent of sunshine, and are, therefore, enabled to execute promptly all orders which may be sent to us. Our Platinotype Enlargements are well known for their

Purity, Vigor, Half-tone, Color, and Absolute Permanence.

PRICE LISTS AND PARTICULARS MAY BE OBTAINED FROM

WILLIS & CLEMENTS, 123 W. 26th St., New York.

N. B.—Ours is the only Electric Light used in the United States for this purpose.

THE Willis Platinotype Process,

WILLIS & CLEMENTS, 123 W. 26th St., New York,
PROPRIETORS FOR THE UNITED STATES.

This is the *simplest* photographic process now in use. It is remarkable for its *rapidity* and the *certainty* of its results.

PLATINOTYPES ARE CHARACTERIZED BY A

Beautiful Tone, Perfection of Detail, Pure Whites, and Absolute Permanence.


Licenses to use the process issued, and all necessary materials supplied by the proprietors, from whom terms and detailed information may be obtained.

Specialties.

ADVERTISING RATES FOR SPECIALTIES.—It will be understood that matter under this head is not to be considered as always having editorial sanction, though we shall endeavor to clear it of anything tending to deceive or mislead. Stock-dealers will find this a beneficial mode of advertising, and sure to pay largely. Six lines, one insertion, \$2.00, and 25 cents for each additional line, seven words to a line—in advance. *Operators desiring situations, no charge.* Matter must be received by the 23d to secure insertion. Advertisers will please not ask us for recommendations. We cannot undertake to mail answers to parties who advertise. Please always add your address to the advertisement.

ROCKWOOD SOLAR PRINTING CO.

GEO. G. ROCKWOOD, President.
GEO. H. ROCKWOOD, Superintendent.
J. AUGUSTUS RANDEL, Business Manager.

 PLATINUM AND SILVER PRINTS AT THE SAME PRICES.

New and Lower Price-list.

Size.	Unmounted.	Mounted.
11 x 14 and under	\$1 00	\$1 50
13 x 16		
14 x 17	1 50	2 00
16 x 20		
18 x 22	1 75	2 25
20 x 24	2 00	2 50
22 x 27		
25 x 30	2 50	3 00
26 x 32	3 00	3 75
29 x 36	4 00	5 00
30 x 40	5 00	6 00
35 x 45	6 00	7 50
40 x 50	8 00	10 00

SPECIAL NOTICE.—As so much depends upon the good printing qualities of a solar negative, we will make solar negatives from copies *without charge*, if the originals are sent to us with the orders for enlargements.

All orders must be accompanied by the cash. Make all P. O. orders payable to

"ROCKWOOD SOLAR PRINTING COMPANY,"

17 Union Square, New York.

SOLAR CAMERAS.—D. A Woodward, Baltimore, Md. Send for price-list.

PROF. D. A. WOODWARD: "The Gem Solar Camera, for which I paid you \$60, gives the best satisfaction. I cheerfully recommend them to the fraternity.

LEON LA COSTA.

"DANIPHAN, KANSAS, May 3d, 1880."

WANTED.—A good operator, and a good printer and toner. First-class men can secure a permanent situation. Apply at once, stating wages,

T. M. SCHLEIER,

Nashville, Tenn.

SPRING! SWING! STILE!

A GREAT SUCCESS.—*Seavey's Rustic Stile.* Can be used with any landscape background. Selling rapidly. Promptly delivered. Price, \$15.

Central Park Arch is now furnished as a set piece, with beautiful pair of gates and extra panel. Price, \$30.

Rustic Swing. Complete for use. Price, \$3.75. No boxing.

Linen Foreground. Landscape path and seashore combined. Price, \$12.

NOTICE.—I now paint, and test by photography, my new backgrounds and accessories, in my new skylight. Samples sent to known responsible photographers.

LAFAYETTE W. SEAVEY,

8 Lafayette Place, N. Y.

NORTH'S PRINTING-IN NEGATIVES, "UNDER THE APPLE-BLOSSOMS."—We are making the most practical and useful negative for printing-in effects that has ever been issued for use by the fraternity. Any printer that can print a vignette and tint around the figure, or lay on a mask or cut-out and print same as medallion, can use them with perfect success.

They are all that can be desired for boat pictures, swing, sitting on rock, stile, etc., or unsupported by any accessory; in fact, can be used by every photographer, with charming effect. We make 8 x 10, 11 x 14, and 14 x 17 sizes, either showing the tree and branches of beautiful apple-blossoms mainly, or all of the ground. Prices, \$2.00, \$3.50, and \$5.00, respectively.

As there is nothing of the kind in the market, and it supplies a long-felt want, we feel assured of its complete success to all needing just such an article. We ship them, by express, carefully packed, to any address, on receipt of price.

WALTER C. NORTH,

Utica, N. Y.

OPINIONS OF THE CRAFT.

"I believe the Megatype process to be the greatest photographic improvement of the day for enlargements. It supersedes the costly Solar Camera, does not necessitate direct sunlight, it cheapens and simplifies the work, insures permanency, and gives beautiful results."

—A. BEAUMONT, *Sec. Catholic Art Society.*

Mr. Horgan, of the New York *Daily Graphic*, having expressed some doubts as to the permanency of Megatypes, was allowed to treat some with well-known tests, which would bleach any silver print. The Megatype resisted the test.

Mr. Ourdan, the author of *The Art of Retouching*, writes: I do not know which to admire the most in the Megatype, the ingenuity of the apparatus, the simplicity and certainty of manipulation, the beauty, variety and permanency of the results or the rapidity and economy of production. The process needs no other recommendation than its own apparent merits.

Mr. Cooper, of Birmingham, Connecticut, writes: "If purchasers of the Megatype apparatus fail to increase their business, and make capital out of their old negatives, they will certainly have only themselves to blame."

The popular artist, Rev. Charles Tangueray, writes, May 17th, 1880: "I think it only just to the Megatype Company, as well as to the photographic profession, to state that the Megatype is a wonderful process, offering great advantages over the solar camera, without showing in any of its drawbacks.

"To be able to produce fine enlargements on paper, porcelain, or canvas, in a few minutes, and by almost any light, and to know the results obtained to be permanent, must be of great importance to all enterprising artists wishing to revive trade, and give satisfaction to their patrons."

WANTED. — A retoucher and printer. One having a knowledge of the other branches, and is willing to make himself generally useful; must be of steady habits, and come well recommended. The right party can have a permanent situation. Terms must be reasonable.

H. Noss,
New Brighton, Pa.

FOR SALE. — Leavitt's famous gallery, at Newport, R. I., the "boss" watering place of the world. This is a rare chance. Price, \$1800 cash. Address

A. L. LEAVITT,
127 Thames St., Newport, R. I.

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RETOUCHING.

BARTHOLOMEW MEYER, 182 S. CLARKE ST., CHICAGO.

REFERENCES.

Kurtz, } Sarony, }	NEW YORK.	Brand, Rocher, Mosher, Beebe, }	CHICAGO.
Instructions given to advanced students.			

THE WHITE & SNYDER NEGATIVE RETOUCHER.

—Testimonial of this excellent invention:

Mr. E. D. Evans, Corning, N. Y., says: "The machine I received from you a week ago is certainly a *success*. Am more than pleased with it. Can already do finer work with it than without it. My retoucher says he would not be without one for double the price." Read advertisement.

FOR SALE.—A well-furnished, first-class gallery in a live city, with a population of 45,000 in a radius of five miles. This is a good opening for a man who can make first-class city work. Competition very small for the population. No postal cards answered. Address

MICHAEL, Care this Office.

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D. A. WOODWARD, Baltimore, Md.

TWENTY YEARS' EXPERIENCE.

J. L. CLARK.

Sweep smelter, gold and silver refiner, assayer. Special attention paid to refinings of photographers' waste. No. 10 Fayette St., between 9th and 10th, below Arch St., Phila., Pa.

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BENJ. F. JONES,
357 Westminster St., Providence, R. I.

FOR SALE.—One of the Centennial Photographic Co.'s double-wheel hand-cars, large enough to work 17 x 21 plates. Can be trundled by one person, and is just the thing for landscape work about home. Delivered to Railroad depot for \$25.00. In good order.

EDWARD L. WILSON,
116 N. Seventh Street, Phila.

GREAT BARGAINS.—We have some second-hand portrait and view lenses for sale, of nearly all sizes. To any one in want of a good lens, at low price, we will send list of all sizes we have.

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A 10-inch condensing lens and cottage window foreground for a 12- or 15-inch lens, short focus. Address "N," care J. I. Shaw, 10½ Sixth St., Pittsburgh, Pa.

Eastern photograph gallery for a western photograph gallery. Address "Photographer," Northumberland, Pa.

WANTED.—To give first-class negatives of Washington, D. C., for first-class second-hand view lenses. Proofs free to all in earnest. Address Ranald Douglas, 819 Market Space, Washington, D. C.

SITUATIONS WANTED.

No charge for advertisements under this head; limited to four lines. Inserted once only, unless by request.

A permanency by a man of twenty-one years of age, who now has full charge of the gallery wherein he is employed. Can give best references, and will send samples of work. Engagement to begin September 1st. Address M. L. Cornamy, Box 361, Ypsilanti, Mich.

As printer and toner in first-class establishment. Have had ten years' experience in two of the leading galleries of New York. Address, stating salary, W. J. C., care Messrs. E. & H. T. Anthony & Co., 591 Broadway, New York City.

As retoucher and printer. Address Ella Kane, Bowling Green, Wood Co., Ohio.

By a young man twenty-five years of age; is first-class retoucher, printer, toner, and finisher; five years experience in Canadian galleries. For terms and samples, address R. M. Wilson, 31 Monroe Street, Grand Rapids, Mich.

By a successful printer and toner; ten years' experience; is willing to work; can do other branches good; reference. Address C. F. Moelk, care J. C. Somerville, 17 S. 5th St., St. Louis, Mo.

By a first-class printer and toner; ten years' experience. B. Strand, Norristown, Montgomery Co., Pa.

By a young man of good habits, as assistant; good retoucher, and has had experience in the different branches. Charles G. Moft, Gouverneur, St. Lawrence Co., N. Y.

By a printer and toner, with five years' experience in Massachusetts, New York, and Rhode Island. Address John W. Butters, 147 Columbia St., Cambridgeport, Mass.

To operate, print, or retouch, by a young man with seven years' experience; good work; good references. Specimens on application. Address, with terms, C. Archibald, Box 553, Norfolk, Va.

As retoucher and general assistant, by a young man of good habits; good reference given; New York State preferable. Address F. S. Randall, Fulton, Oswego Co., N. Y.

In dark-room, or as printer and toner, Address F. C. Thompson, 12 Gardner Street, Providence, R. I.

An artistic negative retoucher who can do invisible retouching; would like to secure a permanent position in a first-class gallery where good work is demanded. Will retouch one negative gratis. Address F. W. Stafford, Norwalk, O.

By a good printer and toner, who also has considerable experience in operating; best of references from present employer. Address "Photographer," Box 102, Wright's Grove P.O., Cook Co., Ill.

An operator of experience desires employment; city or summer resort; has best of references. Address "Photographer," care "Artist," 1216 Chestnut St., Philadelphia.

ROSENGARTEN & SONS, MANUFACTURING CHEMISTS, PHILADELPHIA.

Nitrate of Silver, Bromide of Ammonium,
Chloride of Gold, Bromide of Potassium,
AND A GENERAL ASSORTMENT OF FINE CHEMICALS.

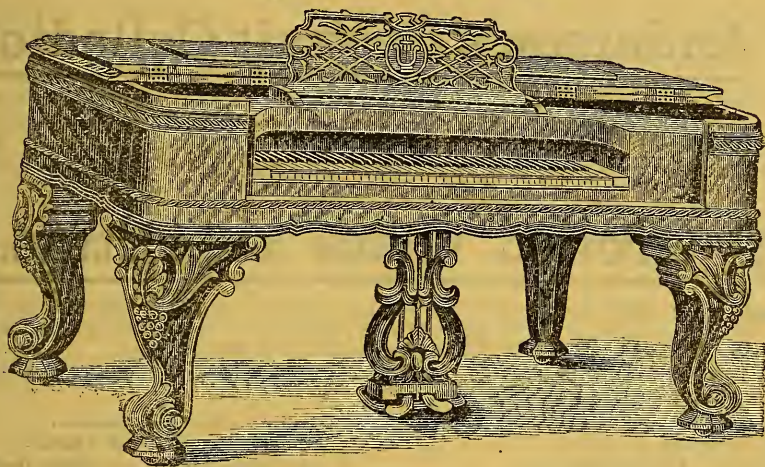
A PIANO ACCESSORY

—FOR—

\$10.



Send for Photographs showing the
Piano in Use.



Send for Photographs showing the
Piano in Use.

The Piano is painted like a background and cut out, profile. It is light and durable. The most useful Accessory in the market.

PHOTOGRAPHS

Of the Piano will be Mailed Free on Application.

HIRAM J. THOMPSON,

HEADQUARTERS FOR

Photographic Materials, Frames, Mouldings, etc.,

259 Wabash Avenue, Chicago.

HANCE'S

SPECIAL

SPECIALTIES.

1 Anderson's Portrait Collodion.

This is especially a *Winter Collodion*, and guaranteed to work with the loveliest harmony, and the most exquisite softness, and freedom from all the *winter* troubles which Photographic Collodion is heir to. ~~Be~~ None genuine unless the signature of *Elbert Anderson*, the great dark-room operator, author, etc., is pasted over the cork of the bottle.

2 Ground Glass Substitute.

Is an indispensable article in the photographic gallery. There are so many uses to which it can be applied that a photographer having once given it a trial, will never be without it, as there is nothing known that will take its place.

The substitute is in the form of a varnish, is flowed and dried the same as varnish, but dries with a granulated or ground-glass surface.

For Vignette Glasses.

- " a Retouching Varnish.
- " Softening Strong Negatives.
- " the Celebrated Berlin Process.

For Ground Glass for Cameras.

- " Glazing Sky and Side Lights.
- " Obscuring Studio and Office Doors.
- " Printing Weak Negatives.

All imitators have given it up. They can't make it. GIVE IT A TRIAL.

PRICE 50 CENTS PER BOTTLE.

3 Hance's Delicate Cream Gun Cotton Is the King Cotton, and has no peer.

Prepared with particular care, warranted free from acid, and very soluble. It has made its way steadily and surely into most of the principal galleries in the country, where parties prefer to make their own collodion, and its superior qualities are shown in the medals awarded at the Centennial, Vienna, and Paris Exhibitions for photographs made with collodion in which it was used.

It is especially adapted to the Rembrandt style, and light drapery. Its sensitiveness renders it particularly adapted for children or any work that requires short exposure, though admirable as well for all work.

PRICE 80 CENTS PER OUNCE.

FOR SALE BY ALL STOCK-DEALERS.

NO RETAIL ORDERS FILLED. ORDER OF YOUR DEALER.


ALFRED L. HANCE, Philadelphia.

Specialties.

ADVERTISING RATES FOR SPECIALTIES.—It will be understood that matter under this head is not to be considered as always having editorial sanction, though we shall endeavor to clear it of anything tending to deceive or mislead. Stock-dealers will find this a beneficial mode of advertising, and sure to pay largely. Six lines, one insertion, \$2.00, and 25 cents for each additional line, seven words to a line—in advance. *Operators desiring situations, no charge.* Matter must be received by the 23d to secure insertion. Advertisers will please not ask us for recommendations. We cannot undertake to mail answers to parties who advertise. Please always add your address to the advertisement.

ROCKWOOD SOLAR PRINTING CO.

GEO. G. ROCKWOOD, GEO. H. ROCKWOOD,
President. Superintendent.
J. AUGUSTUS RANDEL, *Business Manager.*

 PLATINUM AND SILVER PRINTS AT THE SAME PRICES.

New and Lower Price-list.

Size.	Unmounted.	Mounted.
11 x 14 and under...	\$1 00	\$1 50
13 x 16 }	1 50	2 00
14 x 17 }		
16 x 20 }		
18 x 22	1 75	2 25
20 x 24	2 00	2 50
22 x 27 }	2 50	3 00
25 x 30 }		
26 x 32	3 00	3 75
29 x 36	4 00	5 00
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40 x 50	8 00	10 00

SPECIAL NOTICE.—As so much depends upon the good printing qualities of a solar negative, we will make solar negatives from copies *without charge*, if the originals are sent to us with the orders for enlargements.

All orders must be accompanied by the cash. Make all P. O. orders payable to

"ROCKWOOD SOLAR PRINTING COMPANY,"
17 Union Square, New York.

WANTED.—An A No. 1 operator. Situation permanent. Address

J. H. ANDERSON, Charleston, S. C.,
Or, WILSON, HOOD & Co., 825 Arch St., Philada.

THE WHITE & SNYDER NEGATIVE RETOUCHER.
—Testimonial of this excellent invention:

Mr. E. D. Evans, Corning, N. Y., says: "The machine I received from you a week ago is certainly a *success*. Am more than pleased with it. Can already do finer work with it than without it. My retoucher says he would not be without one for double the price." Read advertisement.

FOR SALE.—The best located gallery in Geneva, N. Y. Four railroads; three more to be built; 10,000 negatives; rent, \$100; running water; exclusive rights for Lambert's carbon and Meynerth's mezzotint processes. Will sell at less than inventory, or to the highest bidder, by June 1st. Possession given immediately. Address, *with stamp*, for further particulars,

JAMES G. VAIL,
Box 266, Geneva, N. Y.

WANTED.—A first-class printer, in the leading gallery in the city. Address

E. L. EATON,
Omaha, Neb.

FOR SALE.

DAVIS' PREMIUM GALLERY, ATHENS, GA.—This elegant establishment, first-class in all its appointments, and one of the most widely known and best reputed galleries in the State, is offered for sale at the low price of \$1700—not a penny less, and *cash the only terms*. No better opportunity has been presented to photographers to go into an established business, having all that two men can do, and in the most substantial and prosperous city of Georgia. The duplicate orders from the large stock of negatives are alone worth the price asked for the entire establishment, while the trade from the State University, the State College of Agriculture and Mechanic Arts, and the two large female institutes here located, will readily pay for the outlay. Parties contemplating buying, and wishing the needed assistance, can secure the services of the present assistant, a gentleman strictly first-class in all branches, and thoroughly reliable, to carry on the business. The climate is so delightful and healthy that the city is commended as a winter and summer resort for invalids and for pleasure. No opposition of consequence in one hundred miles. Address as above.

N. B.—No attention paid to postals.

WANTED.—A good operator, who understands retouching. Address

W. E. McKECKNIE, Toledo, Ohio.

FOR SALE.—One extra 4-4 lens and 8 x 10 camera-box, \$30; one view lens, covers an 11 x 14 plate (cost \$50), \$13; one 1-2 view lens (flange wanted), \$8. Reason for selling: I am living in the country, and have no use for them. They are what I used in my gallery in Baltimore. Also one Marey sciopticon, and one hundred pictures of various subjects, \$65. Some of the pictures are in frames, colored. It is a bargain for any one wanting. All in good order. Address

T. P. VARLEY,

Woodwardville, Anne Arundel Co., Md.

FOR SALE.—A well-furnished, first-class gallery in a live city, with a population of 45,000 in a radius of five miles. This is a good opening for a man who can make first-class city work. Competition very small for the population. No postal cards answered. Address

MICHAEL, Care this Office.

My latest success is a *Rustic Stile*. This accessory naturally gives poses that are new. Can be used with any landscape background, and produces charming, novel, and attractive rustic pictures. Price, \$15.

I also announce Spring Blossoms, Central Park Arch (for panels and promenades), and other new backgrounds and accessories.

Samples sent to known responsible parties.

Address LAFAYETTE W. SEAVEY,
8 Lafayette Place, N. Y.

FOR SALE.—A first-class, new photograph car, with full set of first-class instruments and splendid business opening; workmanship, appearance, and convenience warranted first-class. Size, 10 x 28 feet. Been run fifty miles. Whole affair cost \$800. Will sell within thirty days for \$350 cash. Car at Akron, N. Y. For particulars, address

JAMES H. BRATT,

Box 687, Oberlin, Lorain Co., Ohio.

WANTED IMMEDIATELY.—A first-class person to color and finish plate pictures. To the right party steady employment and good pay will be given. Address,

"PHOTO,"

Box 477, Corry, Pa.

CONE-BELLOWS VIEW CAMERA-BOX, for plates 14 x 17 down, for sale cheap. It is as good for use as a new one, and is of the American Optical Company's best make. Has been very little used.

H. C. BRIDLE & Co.,

1018 Wood St., Philadelphia.

A FIRST-CLASS ARTIST in oil, who has studied his art in Italy, desires to escape the "London fog," and form an engagement with some party in America. He is thought to be rapid, bold, brilliant, and accurate in his portraits. Photo-transfers a specialty. Only a first-class connection desired. Address

G. WICHEL,

Care Patti & Co., 27 Ivy Lane, London, Eng.

A MAN of REAL ABILITY, as operator and positionist, who must be a man of genteel address and steady habits as well, can find a permanent situation in a first-class gallery by addressing

"PROPRIETOR," care of this office.

JANUARY, 1879, AND OCTOBER, 1879, PHILADELPHIA PHOTOGRAPHER WANTED.—Will exchange for current numbers or pay fifty cents each for them in books. Parties sending them may keep the pictures if they wish. We want the letter-press to make up volumes for our friends.

EDWARD L. WILSON, Photo. Publisher,

116 N. Seventh St., Philadelphia.

NEGATIVES WANTED.—Of all the large cities of the United States, Canadas, and South America (stereoscopic size), Panoramas, Harbors, and Bridges only. Parties having new, unused negatives will do well to send proofs with prices. Would contract with a good photographer for making negatives. Address

EDWARD L. WILSON,

116 N. Seventh St., Philadelphia.

WOODWARD'S IMPROVED SOLAR CAMERAS, including the \$60 GEM, are made only in Baltimore, Md. They work rapidly on albumen or plain paper, as clear and sharp as by contact. Send for descriptive price-list.

D. A. WOODWARD, Baltimore, Md.

FOR SALE.—The leading gallery in Providence, R. I. (the Jones Gallery). The largest and best appointed in the city; and for convenience, situation, and arrangement, second to none in New England. No establishment in the city can show a better first-class trade. This gallery is up one flight, has two large operating-rooms, with side- and top skylights (one ground, the other plain glass), complete in apparatus and accessories. The reception room large and handsomely furnished.

Providence has a population of 100,000 (one hundred thousand). Best of prices for nice work. This is a fine opportunity for an enterprising man. For sale on account of health. Terms low for cash. For further particulars, address

BENJ. F. JONES,

357 Westminster St., Providence, R. I.

GOOD NEWS FROM THE WONDERFUL
EURYSCOPE.

F. E. Stanley, of Auburn, Me., writes: "I have tested the No. 3 Eurycope, and find that it works much quicker than I expected. I can make negatives under my light in twenty seconds, *perfectly satisfactory*."

J. H. Lloyd, Waterford, N. Y., writes: "The No. C Eurycope I like very much; the only fault, a little slow. I make negatives with it in twenty-five seconds."

Gurly & Harris, of Utica, N. Y., write: "The No. 3 Eurycope gives perfect satisfaction, and exceeds all our expectations."

F. L. Stuber, of Easton, Pa., writes: "Please accept my thanks for sending me such a fine lens (Eurycope). I must say that it is by far the most valuable lens a photographer can have."

J. H. Scotford, of Lansing, Mich., writes: "Having used the No. C Eurycope for over ten months, I want to thank you for introducing to us photographers so valuable an instrument. It surprises me more and more as I use it."

VOIGTLANDER & SON'S NEW BACK-LENS,

AND WHAT THEY SAY OF IT.

Theo. Lilienthal, of New Orleans, writes: "The No. 3 New Back-lens gives entire satisfaction."

Forrester Clark, of Pittsfield, Mass., writes: "The new back-lens for my No. 3b gives complete satisfaction, and works in one-third less time than the old one."

Frank E. Stanley, of Auburn, Me., writes: "The new back-lens for my No. 6 Voigtlander works finely and quick. I am delighted with it."

Peterson & Brother write: "The new back-lens for our No. 3a Voigtlander we find extremely useful, and, indeed, necessary, when quick work is required, as it shortens the time of exposure materially."

Lenses sent to any one on trial.

BENJ. FRENCH & Co.

NOTICE.

Photographers requiring the best and quickest working lenses in the world, please read the two-page advertisement of Benjamin French & Co., and send for price-lists. Lenses sent to any one, C.O.D., express to hold money one week for trial; if not satisfactory, money refunded.

INSTITUTE OF NEGATIVE AND POSITIVE
RETOUCHING.

BARTHOLOMEW MEYER, 182 S. CLARKE ST., CHICAGO.

REFERENCES.

Kurtz,	} NEW YORK.	Brand,	} CHICAGO.
Sarony,		Rocher,	
Instructions given to		Mosher,	
advanced students.		Beebe,	

SCOTFORD'S BROMO-GELATIN DRY PLATES.—Very reliable, very sensitive. For gallery use or viewing. J. H. SCOTFORD, Lansing, Mich.

GREAT BARGAINS.—We have some second-hand portrait and view lenses for sale, of nearly all sizes. To any one in want of a good lens, at low price, we will send list of all sizes we have.

BENJAMIN FRENCH & Co., Boston.

TWENTY YEARS' EXPERIENCE.

J. L. CLARK.

Sweep smelter, gold and silver refiner, assayer. Special attention paid to refinings of photographers' waste. No. 10 Fayette St., between 9th and 10th, below Arch St., Phila., Pa.

References: Wm. H. Rhoads, artist-photographer, Phila.; Messrs. Schreiber & Sons, photographers, Phila.; H. M. Clifford, photographer, Phila.

Returns made in nitrate of silver or chemicals.

PERFECTION VIGNETTES FOR the SOLAR CAMERA.

—A full set, five sizes, sent by mail on receipt of price, \$2.50.

W. L. SHOEMAKER,

828 Wood Street, Philadelphia.

EXCHANGE COLUMN.

To accommodate those who have old apparatus, etc., to EXCHANGE (not sell), we offer to insert advertisements in this column at the low rate of 15 cents per line (of seven words), or fraction of a line. It will be found a cheap and helpful way of "unloading" useless articles about your studio for better ones. Cash to accompany all advertisements.

SEPTEMBER, 1879, copies of this magazine are wanted to make up sets. 50 cents each, will be given in books by E. L. Wilson, Philadelphia.

Interior and outdoor backgrounds, four 1-4 matched lenses, thirty-six Gem lenses, American Optical Company's best stereo-box, with Morrison lenses, etc., for 14 x 17 view-box and bath, and backgrounds, accessories, etc. Address W. C. Eaton, Nashua, N. H.

WANTED.—To give first-class negatives of Washington, D. C., for first-class second-hand view lenses. Proofs free to all in earnest. Address Randal Douglas, 819 Market Space, Washington, D. C.

Three fine Seavey backgrounds for other Seavey's; prints exchanged. Address J. H. Folsom, Danbury, Conn.

Seavey background for exchange. Address W. E. McKeeknie, Toledo, Ohio.

SITUATIONS WANTED.

No charge for advertisements under this head; limited to four lines. Inserted once only, unless by request.

A lady wishes a position in photograph gallery. Understands negative retouching, mounting, and spotting; also finish pictures in crayon, india ink, and water colors. Address Miss C. L. Goldney, Cooper Institute, New York City.

By a photographer of fifteen years' experience in all branches of the business; doing first-class work; best New York references; speaks German. Address Schlickeisen, 526 Pallisade Ave., Jersey City, N. J.

In some paying gallery, by a first-class printer and toner, and competent in all branches of the art. Can give good references in regard to character and ability. Address W. H. Jenks, Lock Box 79, St. Albans, Vt.

By experienced Boston operator, who has had charge of first-class galleries, and understands the business in all its branches. Address Operator, 24 Bedford Street, Boston, Mass.

As printer and toner. Please address J. D. Davis, 12 Gardener St., Providence, R. I.

In Massachusetts, New York, or Rhode Island, as operator or general assistant; five years' experience. Address J. W. Butters, 147 Columbia Street, Cambridgeport, Mass.

By a lady, to wait on gallery and retouch. Address E. B. H., 3 Scranton St., Rochester, N. Y.

By a young man of ten years' experience, a position in a good gallery, as operator, retoucher, or printer and toner. Satisfactory reference given; salary moderate. Address A. M. Turner, Portsmouth, Va.

An operator and retoucher of large experience wishes an engagement; understands the business in all its branches. Address W. H. Cook, Owego, Tioga Co., N. Y.

A retoucher wants a situation as such. He would also like to learn photographing. Address J. Stolz, 1211 Hamilton St., Philadelphia.

As printer or toner; am fully competent to do either; can also mount, spot, coat plates, etc. Address J. D. Davis, 12 Gardener Street, Providence, R. I.

By a successful printer and toner; ten years' experience; willing to work; can do other branches good; reference. Address C. F. Moelk, Fort Worth, Texas.

PLATINUM ENLARGEMENTS

BY THE ELECTRIC LIGHT.

By the use of the Electric Light we have succeeded in making ourselves independent of sunshine, and are, therefore, enabled to execute promptly all orders which may be sent to us. Our Platinotype Enlargements are well known for their

Purity, Vigor, Half-tone, Color, and Absolute Permanence.

PRICE LISTS AND PARTICULARS MAY BE OBTAINED FROM

WILLIS & CLEMENTS, 123 W. 26th St., New York.

N. B.—Ours is the only Electric Light used in the United States for this purpose.

THE

Willis Platinotype Process,

WILLIS & CLEMENTS, 123 W. 26th St., New York,

PROPRIETORS FOR THE UNITED STATES.

This is the *simplest* photographic process now in use. It is remarkable for its *rapidity* and the *certainly* of its results.

PLATINOTYPES ARE CHARACTERIZED BY A

Beautiful Tone, Perfection of Detail, Pure Whites, and Absolute Permanence.

Licenses to use the process issued, and all necessary materials supplied by the proprietors, from whom terms and detailed information may be obtained.

BOOK BARGAINS!

Cheap Photographic Books.

We have had an opportunity to buy up a *special lot of books* from a dealer at a low rate, and, as long as they last, offer them as follows:

	Pub. at	Will sell at
MANUAL OF PHOTOGRAPHY. BY LAKE PRICE,	\$3 50	\$2 25
WALZL'S ALMANAC, 1873,	50	30
WALDACK'S ALMANAC, 1864,	50	30
AMERICAN ALMANAC, 1868,	50	30
DRY-PLATE PHOTOGRAPHY,	1 00	60
THE PORCELAIN PICTURE,	1 00	60
THE SECRETS OF THE DARK CHAMBER,	1 00	60
TESSANDIER'S HISTORY & HANDBOOK OF PHOTO.,	2 50	1 50
CARBON MANUAL,	2 00	1 20
MANUAL DE FOTOGRAFIA (In Spanish),	5 00	3 00
HOW TO SIT FOR YOUR PHOTOGRAPH,	75	45
BRITISH JOURNAL ALMANAC, 1878,	50	30
YEAR-BOOK OF PHOTOGRAPHY, 1869, '70, '71, '77, '78,	50	30
ANDERSON'S ALMANAC,	50	30

ALSO, A FEW COPIES OF

PHOTOGRAPHIC MOSAICS, 1867, 1870, 1871, 1872, 1873, 1874,

1875, 1877, 1878, 1879, AT 30 CENTS PER COPY.

All of these are excellent works and the most of them are out of print. The contents is mostly as good and useful as on the day of publication, and this is probably *the last time they will ever be obtainable.*

Parties wishing cheap Photo. Books,

Parties desiring to complete Sets,

Parties forming Libraries,

Parties learning Photography,

NOW IS YOUR TIME!

The prices named are equivalent to *40 per cent. discount* from the publication price.

NOTICE!

Where less than three books are ordered, eight cents on the dollar must be sent for postage. Not less than three books will be sent post-paid at rates named above.

If five dollars' worth are ordered at one time, ten per cent. extra discount will be allowed.

Or, if parties will receive their parcels by express, ten per cent. discount will be allowed.

Two and three cent postage-stamps will be received in payment.

READ THE OFFER CAREFULLY!

EDWARD L. WILSON, Photo. Publisher, 116 N. Seventh St., Phila.

MEGATYPE.

"Patents Applied For" for Apparatus and one of the Special Materials.

No Restrictions! No Licenses! Success Guaranteed!

EVERY MAN HIS OWN ENLARGER.

SOLAR CAMERAS AND ALL KNOWN ENLARGING PROCESSES SUPERSEDED.

BY this invention, which has taken many years to perfect, a splendid enlargement may be shown to the customer in about ten minutes after sitting. The effects obtained are of a highly-finished artistic crayon. The process is very simple and absolutely certain, while, incredible though it may appear, the cost does not exceed ten cents. The results are not only beautiful, but permanent, and the enlargement may be made from any ordinary *carte* negative.

Enlargements on mat ground or full enamelled surfaces, on any colored paper, canvas, or porcelain, and of any desired tones, are easily obtained, and the defects of lighting in the original negatives readily corrected.

This wonderful improvement offers a splendid opportunity for club work.

The Megatype print yields an excellent surface for working in crayon, water, or oil.

The members of the fraternity are cordially invited to call at the Megatype studio and judge of the process for themselves by seeing it in operation.

The complete outfit for producing these Megatypes, consists of a superior English made combination achromatic lens, possessing exquisite defining power, cutting life-size heads, an enlarging Megatype apparatus fitted with a vignetter, reducer and intensifier of Shadows, together with a supply of Megatype collodion, developer, paper, a set of concentrated toning solutions, and a free perpetual Permit will be furnished at the low sum of \$68.

This process being one pre-eminently useful and advantageous in the smallest galleries, and wishing to introduce it to public favor on its own merits, no charge will be made for permits, licenses, printed instructions, or practical demonstrations to the first hundred purchasers of the Megatype outfit. Though the accompanying printed instructions are sufficient, purchasers can have all desired practical instructions free of charge at the Megatype establishment daily from 10 A. M. till 4 P. M., or later by arrangement.

Success in working the process depending in part on the purity of materials required, the chemicals will be manufactured under our own supervision. These may be procured by purchasers of the Megatype outfit through any of the Dealers, from the manufacturer's agents, at lower prices than the photographers could prepare them for themselves.

Direct sunlight is not required, and the exposure varies from 50 seconds to a few minutes.

To prove the capability of the process, we undertake to execute work for anyone at \$1, colored in oil \$3, for all sizes up to 11 x 14, thus enabling photographers to make capital out of their old negatives.

All letters must contain a stamped addressed envelope, and be directed to

MEGATYPE COMPANY,
136 PRINCE STREET, NEW YORK CITY.

THE SOLAR PROCESS

DISCOVERED BY MR. WOLFE,

(OF DAYTON, OHIO),

PRODUCES THE FINEST LARGE PICTURES

THAT HAVE EVER BEEN MADE.

IN BRILLIANCY, SHARPNESS,

CLEARNESS, AND GENERAL EFFECTIVENESS,

They are far superior to any that can be made in any other way, whether by contact or enlargement.

These are strong assertions. To prove them we shall have

Specimens made by this Process on Exhibition at the Chicago Convention,

August 23d, where everybody can see for themselves what it will do. If practicable we shall make enlargements there, and will be obliged if some of you will bring a few sharp, clean, unvarnished negatives for this purpose.

Remember the negative can be used for contact work after it has been prepared by this process for the solar as well as before.

Photographers of the West!

Now is the time to procure the best Solar Process ever discovered, just when improved business will cause a greater demand for large work.

GATCHEL & HYATT,

SOLE AGENTS FOR THE SALE OF RIGHTS.

DON'T FORGET WE HAVE IN OUR STORES

EVERYTHING used by photographers,

EVERYTHING of the very best quality,

EVERYTHING at the lowest rates.

CINCINNATI, O., ST. LOUIS, MO., LOUISVILLE, KY.

THE ONLY SUCCESSFUL

Retouching Machine

IN THE MARKET.

All others only make the motion perpendicular to the glass, and every retoucher knows that it is not enough. In ours all the necessary motions made by the hand are reproduced by the machine, and this is

WHY IT IS SUCCESSFUL

WHEN ALL OTHERS FAIL.

WE HAVE RECENTLY MADE

THREE IMPORTANT IMPROVEMENTS,

WHICH ADD GREATLY TO THEIR VALUE.

- 1st. We have nearly doubled the speed.
- 2d. We have reduced the power required to run it.
- 3d. We have taken away nearly all the noise, even when run at a high speed.

By its use persons inexperienced in retouching can, in a short time, turn out smooth, finely-shaded work. In short, you can better afford to buy one than to be without.

READ THE TESTIMONY.


We clip brief sentences from a few of our letters:

"The Retouching Machine works like a charm."—"We are more than pleased with it."—"I would not take a hundred dollars for mine if I could not get another."—"No photographer can afford to do business without one."

NOW FOR A COMPARISON:

"I have had one of White & Snyder's Electric Machines on trial the same as yours, and worked them side by side; I have returned theirs and retained yours."—"Before I ordered the Retouching Machine from you I wrote to —, of Chicago, as to the merits of the two machines. He said the Imperial was the best, and sent me one; I tried it faithfully for three or four weeks, but all to no purpose; I could not do good work. I sent it back and ordered from you. Suffice it to say, I am perfectly satisfied. If any using it do not do good work, it is not the fault of the machine but the workman."

HOW IS THAT!

 We shall have some of them on Exhibition at the Chicago Convention, August 23d. Come and see them and bring along some negatives to be retouched on them.

GATCHEL & HYATT,

CINCINNATI, O., ST. LOUIS, MO., and LOUISVILLE, KY.,


OWNERS OF PATENT.

Specialties.

ADVERTISING RATES FOR SPECIALTIES.—It will be understood that matter under this head is not to be considered as always having editorial sanction, though we shall endeavor to clear it of anything tending to deceive or mislead. Stock-dealers will find this a beneficial mode of advertising, and sure to pay largely. Six lines, one insertion, \$2.00, and 25 cents for each additional line, seven words to a line—in advance. *Operators desiring situations, no charge.* Matter must be received by the 23d to secure insertion. Advertisers will please not ask us for recommendations. We cannot undertake to mail answers to parties who advertise. Please always add your address to the advertisement.

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40 x 50.....	8 00.....	10 00

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All orders must be accompanied by the cash. Make all P. O. orders payable to

“ROCKWOOD SOLAR PRINTING COMPANY,”
 17 Union Square, New York.

VOIGTLANDER & SON'S NEW PORTRAIT LENSES.
 —We have received some 1-2 size, and three different lengths of focus of the 4-4 size and extra 4-4 size. Will soon have larger sizes of these new lenses.
 BENJ. FRENCH & Co.

WANTED—A partner in the photo-copying business. Location on the summit of the historical *Maiden Rock*, 500 feet above the beautiful Lake Pepin, commanding some of the finest scenery in the world. Have a trade of ten thousand dollars a year. Small capital required. Also, a good opening for a hotel man. Address
 G. J. RILEY, Maiden Rock, Wis.

SPRING! SWING! STILE!

A GREAT SUCCESS.—*Seavey's Rustic Stile.* Can be used with any landscape background. Selling rapidly. Promptly delivered. Price, \$15.

Central Park Arch is now furnished as a set piece, with beautiful pair of gates and extra panel. Price, \$30.

Rustic Swing. Complete for use. Price, \$3.75. No boxing.

Linen Foreground. Landscape path and sea-shore combined. Price, \$12.

NOTICE.—I now paint, and test by photography, my new backgrounds and accessories, in my new skylight. Samples sent to known responsible photographers.

LAFAYETTE W. SEAVEY,
 8 Lafayette Place, N. Y.

BEWARE!

No other apparatus (or *secret process*) can do the work of the IMPROVED SOLAR CAMERAS, including the “Gem,” sold with patent stamp and right at \$60.

Made only at Baltimore, Md. Send for price list.
 D. A. WOODWARD.

CLEVELAND, O., May 1, 1880.

PROF. D. A. WOODWARD.

Have used the *Gem Solar Camera* for about a year; I made very fine enlargements with it. Could not conduct my business without it.

J. F. STEIN.

RACINE, WIS., May 18, 1880.

PROF. D. A. WOODWARD.

I am very much pleased with the working of the Solar Camera. It is about perfect in every particular.
 E. T. BILLINGS.

WANTED.—A gallery or partnership, by a first-class printer and reception-room man; a stirring business man; New York, New Jersey, Washington, or the South, would be preferred. Address
 “PRACTICAL,” P. P. Office.

FOR SALE.—A first-class gallery, fifty miles from New York City, in a city of thirty thousand; excellent trade; oldest gallery in the city. Cause for selling, poor health. For particulars, address

A. W. RANDEL,

974 Gates Ave., Brooklyn, N. Y.

A MANUFACTURER of stereos and trade work desires a situation, as foreman, or head printer and toner; twenty years experience in printing. Has held A No. 1 positions: would take work on contract, in New York City, or a partnership.

Address "STEREO," P. P. Office.

A BARGAIN for the man that gets them.—One pair Dallmeyer's New Patent Stereo Lenses; one pair No. 1 Steinheil Lenses; one 5 x 8 Philadelphia Stereo Box; one Tripod Stand; one Rubber Bath Dish, for 8 x 10 plates; one Double Plate Holder, for Dry Plates; one Developing Box, the most complete box in the market; when closed, it carries all the outfit, except the Camera and Tripod; one American Optical Company's Victoria Box, as good as new; the Holder is perfect.

The above are for sale cheap, and I will guarantee everything as I represent it. No attention paid to postal cards; to any one meaning business, they can secure a bargain, by writing to

COOK ELY, Oshkosh, Wis.



TRADE-MARK

DIAMOND
GELATIN PLATES.

Quick, clean, and certain; development quick, simple, and even; economical, saving valuable time, and giving most perfect results. One dozen quarter plates as sample, sent by mail on receipt of price, eighty cents. Send for full price-list.

C. F. RICHARDSON, Wakefield, Mass.

NOTICE.

Photographers requiring the best and quickest working lenses in the world, please read the two-page advertisement of Benjamin French & Co., and send for price-lists. Lenses sent to any one, C.O.D., express to hold money one week for trial; if not satisfactory, money refunded.

PERFECTION VIGNETTES for the SOLAR CAMERA.

—A full set, five sizes, sent by mail on receipt of price, \$2.50.

W. L. SHOEMAKER,

828 Wood Street, Philadelphia.

FOR RENT.—Upper part of property, corner Columbia and Park Avenues, Philadelphia, for photographic purposes. Splendid business location. Apply to

O. B. DE MORAT,

S. W. Cor. Eighth and Market Sts., Phila.

NORTH'S PRINTING-IN NEGATIVES, "UNDER THE APPLE-BLOSSOMS."—We are making the most practical and useful negative for printing-in effects that has ever been issued for use by the fraternity. Any printer that can print a vignette and tint around the figure, or lay on a mask or cut-out and print same as medallion, can use them with perfect success.

They are all that can be desired for boat pictures, swing, sitting on rock, stile, etc., or unsupported by any accessory; in fact, can be used by every photographer, with charming effect. We make 8 x 10, 11 x 14, and 14 x 17 sizes, either showing the tree and branches of beautiful apple-blossoms mainly, or all of the ground. Prices, \$2.00, \$3.50, and \$5.00, respectively.

Stock dealers are becoming interested, and all supply them.

As there is nothing of the kind in the market, and it supplies a long-felt want, we feel assured of its complete success to all needing just such an article. We ship them, by express, carefully packed, to any address, on receipt of price.

WALTER C. NORTH, Utica, N. Y.

WARNING TO PHOTOGRAPHERS.—Whereas a fraudulent assignment to A. B. Sloanaker, has been recorded in May last, at the Patent Office at Washington, therefore, any sales made since that assignment, except through me personally, will not be recognized. Wm. D. Osborne, sole patentee of the "Artograph" process, for Embellishing and Retouching Photographic Negatives, 1526 Brown Street, Philadelphia.

INSTITUTE OF NEGATIVE AND POSITIVE RETOUCHING.

BARTHOLOMEW MEYER, 182 S. CLARKE ST., CHICAGO.

REFERENCES.

Kurtz,	} NEW YORK.	Brand,	} CHICAGO.
Sarony,		Rocher,	
Instructions given to advanced students.		Mosher,	
		Beebe,	

GREAT BARGAINS.—We have some second-hand portrait and view lenses for sale, of nearly all sizes. To any one in want of a good lens, at low price, we will send list of all sizes we have.

BENJAMIN FRENCH & Co., Boston.

JANUARY, 1879, AND OCTOBER, 1879, PHILADELPHIA PHOTOGRAPHER WANTED.—Will exchange for current numbers or pay fifty cents each for them in books. Parties sending them may keep the pictures if they wish. We want the letter-press to make up volumes for our friends.

EDWARD L. WILSON, Photo. Publisher,

116 N. Seventh St., Philadelphia.

TWENTY YEARS' EXPERIENCE.

J. L. CLARK.

Sweep smelter, gold and silver refiner, assayer. Special attention paid to refinings of photographers' waste. No. 10 Fayette St., between 9th and 10th, below Arch St., Phila., Pa.

References: Wm. H. Rhoads, artist-photographer, Phila.; Messrs. Schreiber & Sons, photographers, Phila., H. M. Clifford, photographer, Phila.

Returns made in nitrate of silver or chemicals.

OPINIONS OF THE CRAFT.

"I believe the Megatype process to be the greatest photographic improvement of the day for enlargements. It supersedes the costly Solar Camera, does not necessitate direct sunlight, it cheapens and simplifies the work, insures permanency, and gives beautiful results."—A. BEAUMONT, *Sec. Catholic Art Society.*

Mr. Horgan, of the *New York Daily Graphic*, having expressed some doubts as to the permanency of Megatypes, was allowed to treat some with well-known tests, which would bleach any silver print. The Megatype resisted the test.

Mr. Ourdan, the author of *The Art of Retouching*, writes: I do not know which to admire the most in the Megatype, the ingenuity of the apparatus, the simplicity and certainty of manipulation, the beauty, variety and permanency of the results or the rapidity and economy of production. The process needs no other recommendation than its own apparent merits.

Mr. Cooper, of Birmingham, Connecticut, writes: "If purchasers of the Megatype apparatus fail to increase their business, and make capital out of their old negatives, they will certainly have only themselves to blame."

The popular artist, Rev. Charles Tangneray, writes, May 17th, 1880: "I think it only just to the Megatype Company, as well as to the photographic profession, to state that the Megatype is a wonderful process, offering great advantages over the solar camera, without showing in any of its drawbacks.

"To be able to produce fine enlargements on paper, porcelain, or canvas, in a few minutes, and by almost any light, and to know the results obtained to be permanent, must be of great importance to all enterprising artists wishing to revive trade, and give satisfaction to their patrons."

NEGATIVES WANTED—Of all the large cities of the United States, Canadas, and South America (stereoscopic size), Panoramas, Harbors, and Bridges only. Parties having new, unused negatives will do well to send proofs with prices. Would contract with a good photographer for making negatives. Address

EDWARD L. WILSON, 116 N. 7th St., Philada.

RECENT TESTIMONIALS TO THE USEFULNESS OF THE "PHILADELPHIA PHOTOGRAPHER."—Kind words and testimonials of satisfaction have been pouring in upon us of late, until we feel constrained to give a little space once more to some of the warmest expressions.

"Journals received, all O. K. I thought at first that I was not able to take the *Philadelphia Photographer* this year, but, after taking a second thought, came to the conclusion that I had best do without something else, and when they came I grasped the same like a drowning man to a straw."—SAMUEL ARMSTRONG. "This is the first year I have ever taken the *Philadelphia Photographer*, and had I known what I was losing by not having it, I would have subscribed for it if it had cost three times its subscription price. It comes to me like the dawn of day after a long night on the picket-post."—C. A. ROSE. "Please send me the best book extant, the *Philadelphia Photographer*, for one year, commencing with the January number."—MELVILLE SUMNER. "May you and your journal live long, to keep us together and improve the craft."—M. H. ALBEE. "I have been a reader of the *Philadelphia Photographer*, and think it the best of its kind there is published."—E. W. LYON. "I cannot afford to be without its valuable teachings and suggestions."—H. R. FARR. "I don't think I could get along successfully without your valuable magazine for a guide. So far I have ever found its advice and counsel good."—C. H. WELLS. "Send us the old reliable *Philadelphia Photographer* for 1880; can't do without it; I tried that one year, but it don't pay."—FOSNOT & HUNTER. "I want you to consider me a life subscriber (photographer's life at least) to your valuable magazine. I take other journals, but consider your's worth them all combined, and no live photographer will be without it; nor, indeed, can he afford to be without it in these days of improvement."—A. H. PARKES. "Glad to have so good a thing for so little, and wishing you lots of new subscribers, in great haste."—CHARLES F. HIMES. "Send me the *Philadelphia Photographer* for 1880, commencing with the January number. I see that I cannot get along without it."—E. F. FEIGER. "I have taken your valuable journal for a number of years. I think it is poor economy for a photographer to deprive himself of literature pertaining to his business. Even if business is dull, I think his expenses could be curtailed in some other direction more advantageous to himself."—F. C. WATSON. "Somehow or other I have neglected to send you the money, also my order for the *Photographer* for another year; but I do so now, for I cannot do without it. Something might happen, you know; therefore, I

want to keep posted, as I get more than the worth of the subscription in knowledge every year."—T. M. WELLS. "I cannot do without the *Photographer*, and I think it one of the best publications in America. It is well worth all you ask for it, to say nothing about the photograph that accompanies each copy."—C. B. TAYLOR. "I just found a photographer who paid forty dollars cash for the solar printing process contained in the journal of September, 1879, which cost me fifty cents. Quite a difference."—S. M. SMITH. "I think there is no photographic journal that I have seen (and I have seen most of them) that can compare with the *Philadelphia Photographer*."—HOWARD H. HUNTINGTON. "The *Philadelphia Photographer* I must have. I have been reading it for the last twelve years, and like it better every year."—F. A. DUNLAP. "I could not keep pace with the times without the *Philadelphia Photographer*. Every photographer in the land should take it."—F. J. CHESINGTON.

\$5 a year, in advance. See page three of cover. EDWARD L. WILSON, Editor and Proprietor, 116 North Seventh Street, Philadelphia.

EXCHANGE COLUMN.

To accommodate those who have old apparatus, etc., to EXCHANGE (not sell), we offer to insert advertisements in this column at the low rate of 15 cents per line (of seven words), or fraction of a line. It will be found a cheap and helpful way of "unloading" useless articles about your studio for better ones. Cash to accompany all advertisements.

SEPTEMBER, 1879, copies of this magazine are wanted to make up sets. 50 cents each, will be given in books by E. L. Wilson, Philadelphia.

WANTED.—To give first-class negatives of Washington, D. C., for first-class second-hand view lenses. Proofs free to all in earnest. Address Randal Douglas, 819 Market Space, Washington, D. C.

3-inch Weston card burnisher, 10-inch burnisher, Seavey's exterior, Bowdish chair complete, Steinheil 10 x 12 view lens, two 9 x 10 glass baths in swing box, etc., for Globe lens (Zentmayer's) with combination, also 8 x 10 view box, 8 x 10 printing frames (shallow), backgrounds, etc. Address A. A. Johnson, Cazenovia, N. Y.

SITUATIONS WANTED.

No charge for advertisements under this head; limited to four lines. Inserted once only, unless by request.

A photographer of long experience, desires a situation in any capacity, in a gallery or stock-house; is able to act as manager. Address A. Hickeyox, care W. E. Hickeyox, Vineland, N. J.

By a good printer and toner, who also has considerable experience in operating. Best of reference from present employer. Address Photographer, Wright's Grove P. O., Box 102, Cook Co., Ill.

A first-class negative retoucher (German) is open to a first-class engagement. Address M. Schmedding, Box 171, Lawrence, Kansas.

By a young man twenty-five years of age; is first-class retoucher, printer, toner, and finisher; five years experience in Canadian galleries. For terms and samples, address R. M. Wilson, 31 Monroe Street, Grand Rapids, Mich.

By an apprentice photographer, willing to work; reference given; four years experience. M. J. Logan, Lock Box 110, Fort Worth, Texas.

First-class negative retoucher, and photographer of fifteen years experience, with best New York references, wants permanent situation. Salary, fifteen dollars a week; no Sunday work. Schlickeyesen, 526 Palisade Ave., Jersey City, New Jersey.

A young man would like a situation, as assistant operator, printer, and toner, in city, or summer resort; terms moderate. Address John W. Butters, 147 Columbia St., Cambridgeport, Mass.

By a young man, of one and a half years experience: wages low; can give best of reference. Address W., Photographer, Meadville, Pa.

By a young lady, who can do nice retouching, and will take charge of reception-room. Address L. B. P., Box 999, Ypsilanti, Mich.

A permanency, by a man twenty-one years of age, who now has full charge of the work in a good gallery. Habits correct. Best of references. Will send samples of work. Address M. L. Corman, Box 961, Ypsilanti, Mich.

By a young man of experience, a first-class retoucher and finishing prints; also, printer and toner; prefers retouching. Can furnish samples. Address G. E. Butt, Norwalk, O.

A first-class retoucher would like a situation in the east. Has had several years' experience in a first-class gallery. Terms reasonable. Would like a place in Boston, Philadelphia, or New York City particularly. Address Miss Alice M. Weeks, Pontiac, Oakland Co., Michigan.

A position as head printer in a first-class firm; has worked for Notman of Montreal, and is thoroughly well up in the printing department. Address Silver Nitrate, office of this Journal.

As printer, toner, or general assistant. Have had eight years' experience in the business. Willing to work hard for what I get. Or would rent a gallery in any pleasant locality. Best of reference. Address George A. Simmon, Photographer, Manayunk, Philadelphia, Pa.

GILBERT'S NEW PROCESS FOR RETOUCHING AND PREPARING SOLAR NEGATIVES.

By E. A. GILBERT, MEADVILLE, PA. [Patent applied for.]

By my process negatives can be retouched and worked to any extent to produce any desired result in the picture. It possesses the following advantages: 1st, Its simplicity of manipulation. No liability of injury to the negative, as but one glass is used, and no heat. 2d, It is the only process that perfectly obliterates all pencil-marks in the enlargement. 3d, The work is all done on the negative, requiring no inking of the print. 4th, It produces what no other process does, a very soft stippled picture, resembling Ink or Crayon. The stippling is but a moment's work. 5th, The most freckled face can be made smooth. 6th, The negative can be used for contact printing. Old negatives can be reduced and prepared for solars. 7th, Any change in negative can be made. High-lights and shadows can be strengthened or weakened if desired, after the negative is finished ready for printing.

CAUTION.

DIRECT YOUR ORDERS TO

**DOUGLASS, THOMPSON & Co.**229 & 231 STATE ST. CHICAGO. 229 & 231 STATE ST.

WE HAVE NO CONNECTION WITH ANY OTHER HOUSE.
 WE DEAL EXCLUSIVELY IN PHOTOGRAPHERS' SUPPLIES.
 WE ATTEND STRICTLY TO OUR OWN BUSINESS.
 WE ARE NOT ENVIOUS OF OUR NEIGHBORS.
 WE ENDEAVOR AT ALL TIMES TO SPEAK THE TRUTH.
 WE DO NOT WATER OUR ALCOHOL.

WE INVITE YOUR ORDERS, AND WILL ENDEAVOR TO
 MAKE YOU OUR PATRONS BY SERVING YOU IN THE
 BEST MANNER POSSIBLE.

WE HAVE AN AMPLE STOCK TO MEET ALL DEMANDS,
 AND WILL MAKE PRICES LOW.

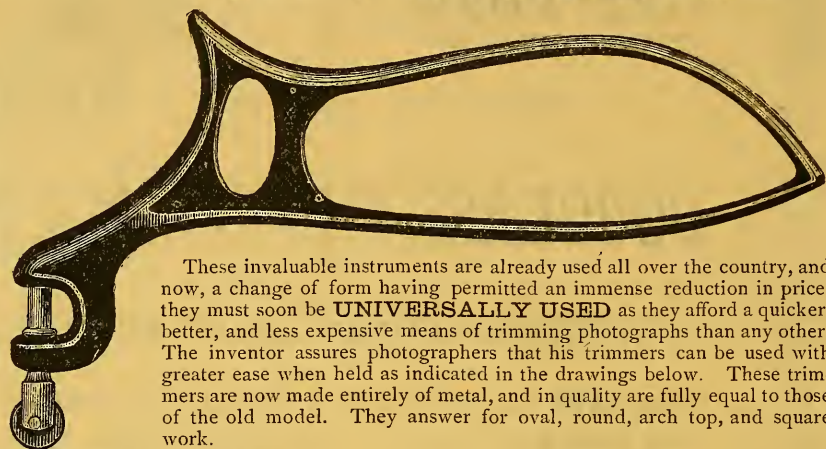
CAUTION.—PLEASE DIRECT YOUR ORDERS
 TO DOUGLASS, THOMPSON & CO.,
 AND REMEMBER THE NUMBER,

229 & 231**STATE ST.****CHICAGO.**

GAYTON A. DOUGLASS.
 HENRY C. THOMPSON.

ROBINSON'S NEW MODEL PHOTOGRAPH TRIMMERS!

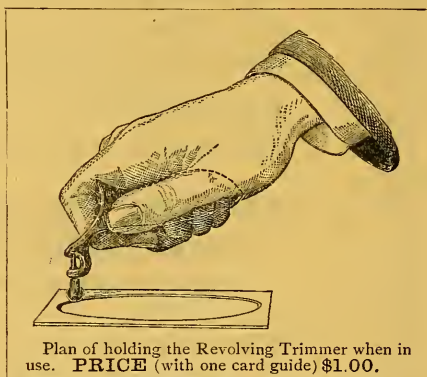
This drawing is of the full natural size and shape of the New Model Revolving Trimmer. The *Straight Cut* is of same size, varying but little in shape.



These invaluable instruments are already used all over the country, and now, a change of form having permitted an immense reduction in price, they must soon be **UNIVERSALLY USED** as they afford a quicker, better, and less expensive means of trimming photographs than any other. The inventor assures photographers that his trimmers can be used with greater ease when held as indicated in the drawings below. These trimmers are now made entirely of metal, and in quality are fully equal to those of the old model. They answer for oval, round, arch top, and square work.



Plan of holding the *Straight Cut* Trimmer when in use. **PRICE, 50 CENTS.**



Plan of holding the Revolving Trimmer when in use. **PRICE (with one card guide) \$1.00.**

ROBINSON'S GUIDES.

MADE OF SHEET-IRON.

We have the following **Regular Sizes** always on hand at 10 cents per inch the longest way of the aperture.

OVALS.

2 x 2 $\frac{7}{8}$	3 $\frac{3}{8}$ x 4 $\frac{3}{8}$	5 x 7	6 $\frac{1}{4}$ x 8 $\frac{1}{4}$
2 $\frac{1}{2}$ x 3 $\frac{1}{2}$	3 $\frac{3}{8}$ x 4 $\frac{3}{8}$	5 $\frac{1}{4}$ x 7 $\frac{1}{4}$	6 $\frac{1}{2}$ x 8 $\frac{1}{2}$
2 $\frac{3}{4}$ x 3 $\frac{1}{4}$	3 $\frac{3}{8}$ x 4 $\frac{3}{8}$	5 $\frac{1}{4}$ x 7 $\frac{1}{4}$	7 x 9
2 $\frac{5}{8}$ x 3 $\frac{3}{8}$	3 $\frac{5}{8}$ x 5 $\frac{1}{8}$	5 $\frac{5}{8}$ x 7 $\frac{5}{8}$	7 $\frac{1}{4}$ x 9 $\frac{1}{4}$
2 $\frac{3}{4}$ x 3 $\frac{3}{8}$	4 x 5 $\frac{3}{8}$	5 $\frac{3}{4}$ x 7 $\frac{3}{4}$	7 $\frac{1}{2}$ x 9 $\frac{1}{2}$
2 $\frac{7}{8}$ x 4 $\frac{1}{8}$	4 $\frac{3}{8}$ x 6 $\frac{3}{8}$	6 x 8	7 $\frac{3}{4}$ x 9 $\frac{3}{4}$

SQUARE OR ROUND CORNERED.

2 $\frac{1}{16}$ x 3 $\frac{3}{4}$	2 $\frac{5}{16}$ x 3 $\frac{3}{4}$	2 $\frac{3}{4}$ x 4 $\frac{1}{2}$	4 x 5 $\frac{5}{8}$
2 $\frac{1}{8}$ x 3 $\frac{3}{4}$	2 $\frac{5}{16}$ x 3 $\frac{3}{4}$	2 $\frac{7}{8}$ x 4 $\frac{3}{8}$	4 $\frac{1}{8}$ x 5 $\frac{7}{8}$
2 $\frac{1}{8}$ x 3 $\frac{3}{4}$	2 $\frac{5}{16}$ x 4 $\frac{1}{4}$	3 $\frac{7}{8}$ x 5 $\frac{1}{4}$	3 $\frac{7}{8}$ x 6
2 $\frac{5}{16}$ x 3 $\frac{5}{16}$			4 x 6 $\frac{1}{8}$

FOR STEREOGRAPHS.

Arch Tops.	Round Cornered.	Round.
3 $\frac{1}{16}$ x 3 $\frac{3}{4}$, 3 x 3	3 $\frac{1}{16}$ x 3 $\frac{3}{4}$, 3 x 3	3 x 3

The above sizes suit the Collins Card Mounts, and photographers knowing that they can be always had at the low price of ten cents per inch, would do well to *make their sizes accord*, as orders can also be filled more quickly. Ten days is required to make special sizes.

Special Sizes made to order, at 15 cents per inch, the longest way of the aperture.

ROBINSON'S PHOTOGRAPH TRIMMERS are *Substitutes for the Knife for Trimming Photographs, and do the work much more expeditiously and elegantly.*
They Save Time, Save Prints, and Save Money.

They do not *cut*, but *pinch off* the waste paper, and leave the print with a neatly beveled edge which facilitates adherence to the mount. Try one, and you will discard the knife and punch at once. For ovals and rounded corners they are worth their weight in gold.

For sale by
all Dealers.

EDWARD L. WILSON, Manufacturer's Agent, 116 N. Seventh St., Philadelphia.

BOOK BARGAINS!

Cheap Photographic Books.

We have had an opportunity to buy up a *special lot of books* from a dealer at a low rate, and, as long as they last, offer them as follows:

	Pub. at	Will sell at
MANUAL OF PHOTOGRAPHY. BY LAKE PRICE,	\$3 50	\$2 25
WALZL'S ALMANAC, 1873,	50	30
WALDACK'S ALMANAC, 1864,	50	30
AMERICAN ALMANAC, 1868,	50	30
DRY-PLATE PHOTOGRAPHY,	1 00	60
THE PORCELAIN PICTURE,	1 00	60
THE SECRETS OF THE DARK CHAMBER,	1 00	60
TESSANDIER'S HISTORY & HANDBOOK OF PHOTO.,	2 50	1 50
CARBON MANUAL,	2 00	1 20
MANUAL DE FOTOGRAFIA (In Spanish),	5 00	3 00
HOW TO SIT FOR YOUR PHOTOGRAPH,	75	45
BRITISH JOURNAL ALMANAC, 1878,	50	30
YEAR-BOOK OF PHOTOGRAPHY, 1869, '70, '71, '77, '78,	50	30
ANDERSON'S ALMANAC,	50	30

ALSO, A FEW COPIES OF

PHOTOGRAPHIC MOSAICS, 1867, 1870, 1871, 1872, 1873, 1874,
1875, 1877, 1878, 1879, AT 30 CENTS PER COPY.

All of these are excellent works and the most of them are out of print. The contents is mostly as good and useful as on the day of publication, and this is probably *the last time they will ever be obtainable*.

Parties wishing cheap Photo. Books,

Parties desiring to complete Sets,

Parties forming Libraries,

Parties learning Photography,

NOW IS YOUR TIME!

The prices named are equivalent to *40 per cent. discount* from the publication price.

NOTICE!

Where less than three books are ordered, eight cents on the dollar must be sent for postage. Not less than three books will be sent post-paid at rates named above.

If five dollars' worth are ordered at one time, ten per cent. extra discount will be allowed.

Or, if parties will receive their parcels by express, ten per cent. discount will be allowed.

Two and three cent postage-stamps will be received in payment.

READ THE OFFER CAREFULLY!

EDWARD L. WILSON, Photo. Publisher, 116 N. Seventh St., Phila.

CRAMER & NORDEN'S

EXTRA RAPID

— DRY —

PLATES.

*TEN TIMES AS SENSITIVE
AS THE WET PLATES.*

FOR GROUPS,
FOR INSTANTANEOUS PICTURES OF CHILDREN,
FOR NERVOUS PEOPLE, OLD AND YOUNG,
FOR THE TRAVELLING ARTIST,
And FOR GENERAL USE they CANNOT BE SURPASSED.

— ALWAYS READY FOR EXPOSURE AT A MOMENT'S NOTICE. —

For full particulars, working formula, and price list, apply to

CRAMER & NORDEN,
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Outfits for
Galleries
A Specialty.
Frames
of all kinds,
best styles.

→ **WM. J. HAZENSTAB,**
DEALER IN
Photographic Materials
←

CHEMICALS AND APPARATUS,
FRAMES AND ALBUMS.

406 Market Street, St. Louis, Mo.



All orders
receive my
personal
care.
Send me a
trial order
this month.

I always carry in stock a large assortment of the leading

PHOTOGRAPHIC REQUIREMENTS,

So that I am able to fill orders promptly, and to the entire satisfaction of my patrons. Price list sent on application.

Small expenses enables me to sell very low. Boxing at cost. Address all orders to new store.

WM. J. HAZENSTAB,
406 Market Street, St. Louis, Mo

SCHOLTEN'S IMPROVED Head-Rest Clip

(MADE OF SOLID BRASS.)

PERFECT, SIMPLE, AND CHEAP.

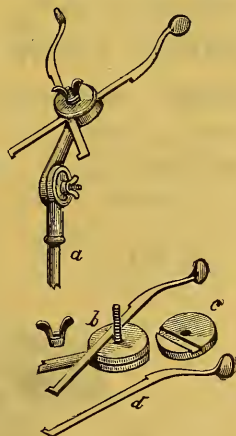
TO SEE IT, IS TO HAVE ONE SURE.

PRICE, EACH, \$3.00.

(PATENT APPLIED FOR.)

Every Intelligent Photographer can readily see its convenience at a glance. It can be used on any Head Rest. Is made and finished in the very best manner.

- a.* Shows the part fitting into the Rod of Head Rest.
- b.* Shows the section which revolves around the screw holding the lower Prong,
- c.* Shows the upper section which holds the other Prong, which, when in place, is reversed, fitting on top of *b*.
- d.* Shows the exact shape of Prongs which slide in the sections between the front and back shoulder.

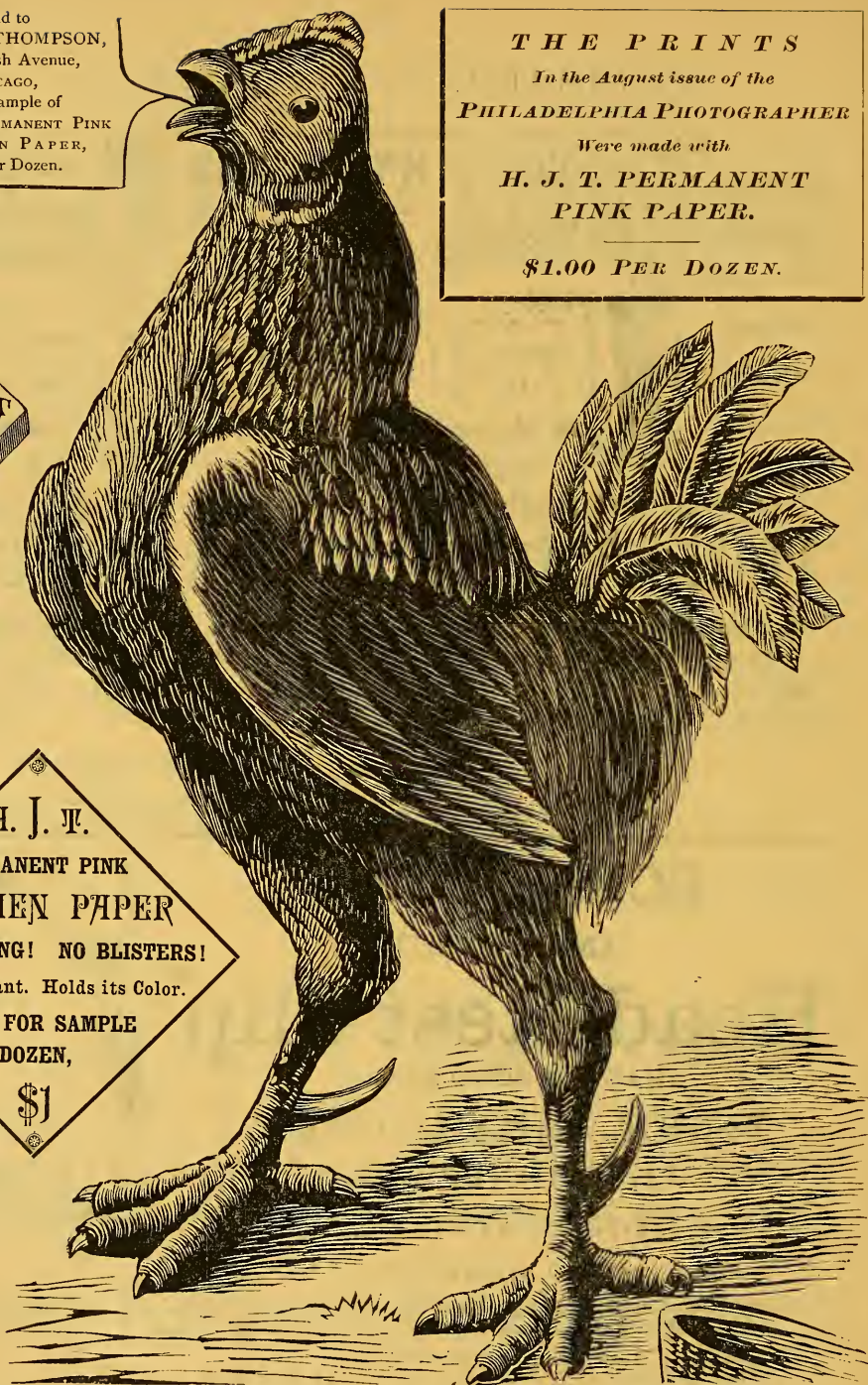


J. C. SOMERVILLE, Sole Agent,
17 SOUTH FIFTH STREET, ST. LOUIS, MO.

Send to
HIRAM J. THOMPSON,
259 Wabash Avenue,
CHICAGO,
For a Sample of
H. J. T. PERMANENT PINK
ALBUMEN PAPER,
\$1.00 Per Dozen.



THE BRAND.



FOREMAN OF THE ALBUMEN FACTORY.

THE PRINTS
In the August issue of the
PHILADELPHIA PHOTOGRAPHER
Were made with
**H. J. T. PERMANENT
PINK PAPER.**

\$1.00 PER DOZEN.

"THE MAMMOTH STOCK-HOUSE,"

*With 23,000 Square Feet of
Floor Room.*

*Largest House of the kind in
the United States.*


HIRAM J. THOMPSON,
259 Wabash Avenue. CHICAGO.

Specialties.

ADVERTISING RATES FOR SPECIALTIES.—It will be understood that matter under this head is not to be considered as always having editorial sanction, though we shall endeavor to clear it of anything tending to deceive or mislead. Stock-dealers will find this a beneficial mode of advertising, and sure to pay largely. Six lines, one insertion, \$2.00, and 25 cents for each additional line, seven words to a line—in advance. *Operators desiring situations, no charge.* Matter must be received by the 23d to secure insertion. Advertisers will please not ask us for recommendations. ~~25~~ We cannot undertake to mail answers to parties who advertise. Please always add your address to the advertisement.

ROCKWOOD SOLAR PRINTING CO.

GEO. G. ROCKWOOD, GEO. H. ROCKWOOD,
President. *Superintendent.*
 J. AUGUSTUS RANDEL, *Business Manager.*

 **PLATINUM AND SILVER PRINTS AT THE SAME PRICES.**

New and Lower Price-list.

Size.	Unmounted.	Mounted.
11 x 14 and under...	\$1 00.....	\$1 50
13 x 16 }	1 50.....	2 00
14 x 17 }		
16 x 20 }		
18 x 22.....	1 75.....	2 25
20 x 24.....	2 00.....	2 50
22 x 27 }	2 50.....	3 00
25 x 30 }		
26 x 32.....	3 00.....	3 75
29 x 36.....	4 00.....	5 00
30 x 40.....	5 00.....	6 00
35 x 45.....	6 00.....	7 50
40 x 50.....	8 00.....	10 00

SPECIAL NOTICE.—As so much depends upon the good printing qualities of a solar negative, we will make solar negatives from copies *without charge*, if the originals are sent to us with the orders for enlargements.

All orders must be accompanied by the cash. Make all P. O. orders payable to

"ROCKWOOD SOLAR PRINTING COMPANY,"
 17 Union Square, New York.

GALLERY WANTED.—In a city of not less than 20,000, a first-class photograph gallery, for which cash will be paid. No "run out" or cheap place need apply. Address, with full information and references,

CHAS. A. MEINERTH,
 Newburyport, Mass.

FOR RENT.—Photograph gallery in Bordentown, N. J.; in first-class order and partially furnished. A good opportunity for a live man. For particulars, address,

Dr. P. F. HYATT,
 Bordentown, N. J.

ON AUGUST 23D, AT CHICAGO,
 LAFAYETTE W. SEAVEY

Will exhibit a large assortment of *Back-grounds, Accessories, and Photographs*, to which he invites the careful inspection of all progressive and artistic photographers.

BEST INVESTMENT IN AMERICA.—A well-furnished gallery, building, and two lots, on best street in county-seat: good stock of frames and notions, all for \$2000; will give time on part. No opposition in the county. Address

THOMAS STOUT,
 Unionville, Mo.

BEWARE OF INFRINGEMENTS.—W. F. Ashe, 106 Bleecker St., New York, is the inventor and manufacturer of the *Telescopic* or *Extension Pedestal* for forming convenient heights of the pose.

They are all stamped *Patented*.

NORTH'S IMPROVED "APPLE-BLOSSOM" NEGATIVES.—We have made an attractive addition to our Printing-in Negatives, by placing an *old moss-covered picket-fence and steps* by the old tree, making it more realistic than ever. Sample print sent to parties, to be returned promptly.

See other advertisement in this journal for particulars.

WALTER C. NORTH,
 Utica, N. Y.

FOR SALE.—An old-established, well-regulated gallery; 12x14 skylight; 14x12 side-light; Dallmeyer 2B and 3B lenses, and 12-inch direct solar-camera; A No. 1 outfit. Parlor and reception-room both on second floor. Rent, \$200 a year. Six railroads; three colleges; a fine cotton country; 10,000 inhabitants.

This splendid chance for \$1200. Reason for selling, eye-sight failing. None but those meaning business need apply.

Lock Box 205,
 Charlotte, N. C.

FOR SALE.—Photograph gallery. A strictly first-class place. Business established thirty years. Prominently located in one of the largest and wealthiest cities on the great western chain of lakes. Address J. C.,

Care of W. H. Whittaker, Cleveland, Ohio.

FOR SALE, IN BOSTON.—First-class gallery; best location in the city; studio, 22 x 50 feet; two lights; 25,000 fine negatives. Will be sold at a bargain, or would take a partner who thoroughly understands the business under the skylight.

Address "ARTIST,"

Care Charles Nowell, Boston, Mass.

WANTED.—A No. 1 operator of correct habits. Satisfactory salary. Send samples, and full particulars.

W. L. BATES,
Denver, Colorado.

"LARGE APPLE-BLOSSOMS."—With North's Printing-in Negatives, 11 x 14 and 14 x 17 sizes, you can make *charming effects, if you do not own a large camera*. An eight-inch standing figure looks beautiful under the "Apple-Blossoms," as a large panel or printed out in full, showing the old rustic moss-covered fence. Send for descriptive circular. See advertisement.

FOR SALE.—Having bought Mr. Ellison's negatives, and having myself all the negatives I require, I will sell 100 or 200 view-negatives, stereoscopic and 8 x 10, of Quebec and vicinity. They are in a more or less good condition. Will sell in a lot, good and bad, *cheap*.

L. P. VALLEE,

Portrait and Landscape Photographer,
Quebec, Canada.

VOIGTLANDER & SON'S NEW PORTRAIT LENSES.—We have received some 1-2 size, and three different lengths of focus of the 4-4 size and extra 4-4 size. Will soon have larger sizes of these new lenses.

BENJ. FRENCH & Co.

A MANUFACTURER of stereos and trade work desires a situation, as foreman, or head printer and toner; twenty years experience in printing. Has held A No. 1 positions: would take work on contract, in New York City, or a partnership.

Address "STEREO," P. P. Office.

PERFECTION VIGNETTES for the SOLAR CAMERA.—A full set, five sizes, sent by mail on receipt of price, \$2.50.

W. L. SHOEMAKER,
828 Wood Street, Philadelphia.

NOTICE.

Photographers requiring the best and quickest working lenses in the world, please read the two-page advertisement of Benjamin French & Co., and send for price-lists. Lenses sent to any one, C.O.D., express to hold money one week for trial; if not satisfactory, money refunded.

B E W A R E !

No other apparatus (*or secret process*) can do the work of the IMPROVED SOLAR CAMERAS, including the "Gem," sold with patent stamp and right at \$60.

Made only at Baltimore, Md. Send for price list.

D. A. WOODWARD.

CLEVELAND, O., May 1, 1880.

PROF. D. A. WOODWARD.

Have used the *Gem Solar Camera* for about a year; I made very fine enlargements with it. Could not conduct my business without it.

J. F. STEIN.

RACINE, WIS., May 18, 1880.

PROF. D. A. WOODWARD.

I am very much pleased with the working of the Solar Camera. It is about perfect in every particular.

E. T. BILLINGS.

WANTED.—A gallery or partnership, by a first-class printer and reception-room man; a stirring business man; New York, New Jersey, Washington, or the South, would be preferred. Address "PRACTICAL," P. P. Office.

NORTH'S PRINTING-IN NEGATIVES, "UNDER THE APPLE-BLOSSOMS."—We are making the most practical and useful negative for printing-in effects that has ever been issued for use by the fraternity. Any printer that can print a vignette and tint around the figure, or lay on a mask or cut-out and print same as medallion, can use them with perfect success.

They are all that can be desired for boat pictures, swing, sitting on rock, stile, etc., or unsupported by any accessory; in fact, can be used by every photographer, with charming effect. We make 8 x 10, 11 x 14, and 14 x 17 sizes, either showing the tree and branches of beautiful apple-blossoms mainly, or all of the ground. Prices, \$2.00, \$3.50, and \$5.00, respectively.

Stock dealers are becoming interested, and all supply them.

As there is nothing of the kind in the market, and it supplies a long-felt want, we feel assured of its complete success to all, needing just such an article. We ship them, by express, carefully packed, to any address, on receipt of price.

WALTER C. NORTH, Utica, N. Y.

INSTITUTE OF NEGATIVE AND POSITIVE
RETOUCHING.

BARTHOLOMEW MEYER, 182 S. CLARKE ST., CHICAGO.

REFERENCES.

Kurtz, } Sarony, }	NEW YORK.	Brand, } Rocher, }	CHICAGO.
Instructions given to advanced students.		Mosher, Beebe, }	

GREAT BARGAINS.—We have some second-hand portrait and view lenses for sale, of nearly all sizes. To any one in want of a good lens, at low price, we will send list of all sizes we have.

BENJAMIN FRENCH & Co., Boston.

TWENTY YEARS' EXPERIENCE.

J. L. CLARK.

Sweep smelter, gold and silver refiner, assayer. Special attention paid to refinings of photographers' waste. No. 10 Fayette St., between 9th and 10th, below Arch St., Phila., Pa.

References: Wm. H. Rhoads, artist-photographer, Phila.; Messrs. Schreiber & Sons, photographers, Phila.; H. M. Clifford, photographer, Phila.

Returns made in nitrate of silver or chemicals.

RECENT TESTIMONIALS TO THE USEFULNESS OF THE "PHILADELPHIA PHOTOGRAPHER."—Kind words and testimonials of satisfaction have been pouring in upon us of late, until we feel constrained to give a little space once more to some of the warmest expressions.

"Journals received, all O. K. I thought at first that I was not able to take the *Philadelphia Photographer* this year, but, after taking a second thought, came to the conclusion that I had best do without something else, and when they came I grasped the same like a drowning man to a straw."—SAMUEL ARMSTRONG. "This is the first year I have ever taken the *Philadelphia Photographer*, and had I known what I was losing by not having it, I would have subscribed for it if it had cost three times its subscription price. It comes to me like the dawn of day after a long night on the picket-post."—C. A. ROSE. "Please send me the best book extant, the *Philadelphia Photographer*, for one year, commencing with the January number."—MELVILLE SUMNER. "May you and your journal live long, to keep us together and improve the craft."—M. H. ALBEE. "I have been a reader of the *Philadelphia Photographer*, and think it the best of its kind there is published."—E. W. LYON. "I cannot afford to

be without its valuable teachings and suggestions."—H. R. FARR. "I don't think I could get along successfully without your valuable magazine for a guide. So far I have ever found its advice and counsel good."—C. H. WELLS. "Send us the *old reliable Philadelphia Photographer* for 1880; can't do without it; I tried that one year, but it don't pay."—FOSNOT & HUNTER. "I want you to consider me a life subscriber (photographer's life at least) to your valuable magazine. I take other journals, but consider your's worth them all combined, and no live photographer will be without it; nor, indeed, can he afford to be without it in these days of improvement."—A. H. PARKES. "Glad to have so good a thing for so little, and wishing you lots of new subscribers, in great haste."—CHARLES F. HIMES. "Send me the *Philadelphia Photographer* for 1880, commencing with the January number. I see that I cannot get along without it."—E. F. FEIGER. "I have taken your valuable journal for a number of years. I think it is poor economy for a photographer to deprive himself of literature pertaining to his business. Even if business is dull, I think his expenses could be curtailed in some other direction more advantageous to himself."—F. C. WATSON. "Somehow or other I have neglected to send you the money, also my order for the *Photographer* for another year; but I do so now, for I cannot do without it. Something might happen, you know; therefore, I want to keep posted, as I get more than the worth of the subscription in knowledge every year."—T. M. WELLS. "I cannot do without the *Photographer*, and I think it one of the best publications in America. It is well worth all you ask for it, to say nothing about the photograph that accompanies each copy."—C. B. TAYLOR. "I just found a photographer who paid forty dollars cash for the solar printing process contained in the journal of September, 1879, which cost me fifty cents. Quite a difference."—S. M. SMITH. "I think there is no photographic journal that I have seen (and I have seen most of them) that can compare with the *Philadelphia Photographer*."—HOWARD H. HUNTINGTON. "The *Philadelphia Photographer* I must have. I have been reading it for the last twelve years, and like it better every year."—F. A. DUNLAP. "I could not keep pace with the times without the *Philadelphia Photographer*. Every photographer in the land should take it."—F. J. CHESSINGTON.

\$5 a year, in advance. See page three of cover. EDWARD L. WILSON, Editor and Proprietor, 116 North Seventh Street, Philadelphia.

JANUARY, 1879, AND OCTOBER, 1879, PHILADELPHIA PHOTOGRAPHER WANTED.—Will exchange for current numbers or pay fifty cents each for them in books. Parties sending them may keep the pictures if they wish. We want the letter-press to make up volumes for our friends.

EDWARD L. WILSON, Photo. Publisher,
116 N. Seventh St., Philadelphia.

NEGATIVES WANTED—Of all the large cities of the United States, Canadas, and South America (stereoscopic size), Panoramas, Harbors, and Bridges only. Parties having new, unused negatives will do well to send proofs with prices. Would contract with a good photographer for making negatives. Address

EDWARD L. WILSON, 116 N. 7th St., Philada.

FOR SALE.—A first-class gallery in Cincinnati, Ohio. Centrally located; living rooms adjoining; low rent; large and commodious work-rooms; everything complete; comprising second and third floors; will be sold for cash, at a bargain, if sold immediately. Address

"BUSINESS," care P. Smith & Co.,
56 West Fourth Street, Cincinnati, Ohio.

OPINIONS OF THE CRAFT.

"I believe the Megatype process to be the greatest photographic improvement of the day for enlargements. It supersedes the costly Solar Camera, does not necessitate direct sunlight, it cheapens and simplifies the work, insures permanency, and gives beautiful results."

—A. BEAUMONT, *Sec. Catholic Art Society.*

Mr. Horgan, of the *New York Daily Graphic*, having expressed some doubts as to the permanency of Megatypes, was allowed to treat some with well-known tests, which would bleach any silver print. The Megatype resisted the test.

Mr. Ourdan, the author of *The Art of Retouching*, writes: I do not know which to admire the most in the Megatype, the ingenuity of the apparatus, the simplicity and certainty of manipulation, the beauty, variety and permanency of the results or the rapidity and economy of production. The process needs no other recommendation than its own apparent merits.

Mr. Cooper, of Birmingham, Connecticut, writes: "If purchasers of the Megatype apparatus fail to increase their business, and make capital out of their old negatives, they will certainly have only themselves to blame."

The popular artist, Rev. Charles Tangueray, writes, May 17th, 1880: "I think it only just to

the Megatype Company, as well as to the photographic profession, to state that the Megatype is a wonderful process, offering great advantages over the solar camera, without showing in any of its drawbacks.

"To be able to produce fine enlargements on paper, porcelain, or canvas, in a few minutes, and by almost any light, and to know the results obtained to be permanent, must be of great importance to all enterprising artists wishing to revive trade, and give satisfaction to their patrons."

WANTED.—First-class operator; situation permanent. Send photo. of self, sample of work, and salary expected. A. J. W. COPELIN,

75 Madison Street, Chicago.

WANTED at Klauber's Gallery, Louisville, Ky., a first-class printer, who can retouch if necessary. State salary and send samples of work."

EXCHANGE COLUMN.

To accommodate those who have old apparatus, etc., to EXCHANGE (not sell), we offer to insert advertisements in this column at the low rate of 15 cents per line (of seven words), or fraction of a line. It will be found a cheap and helpful way of "unloading" useless articles about your shop for better ones. Cash to accompany all advertisements.

SEPTEMBER, 1879, copies of this magazine are wanted to make up sets. 50 cents each, will be given in books by E. L. Wilson, Philadelphia.

WANTED.—To give first-class negatives of Washington, D. C., for first-class second-hand view lenses. Proofs free to all in earnest. Address Ranald Douglas, 819 Market Space, Washington, D. C.

SITUATIONS WANTED.

No charge for advertisements under this head; limited to four lines. Inserted once only, unless by request.

As a first-class retoucher and printer. Address C. W. Kennedy, 262 Pearl St., Buffalo, N. Y.

The Association of Operative Photographers of New York recommend to the profession Mr. Victor Aether, a negative retoucher; able to assist in the dark-room; can make glaces; first-class man. Mr. Julius Hofmeister, highly-educated gentleman; acquainted with all branches of the profession, principally retouching; recently from Germany. Address Chas. Ehrmann, Secretary, 360 East 116th St., New York.

A lady desires to procure a situation as retouching artist in a studio of good standing. Address M. M. S., 262 Pearl St., Buffalo, N. Y.

By a German operator; married; of fifteen years' experience; three years in New York; with best references; artistic; first-class at all, in lighting and posing the figure, the management of chemicals, and retouching; a permanent situation, where he may have opportunity of perfecting in English speaking; strictly temperate; no Sunday work. Schlickeijns, 526 Pallisade Ave., Jersey City, N. J.

By a first-class printer and toner, with some good man where there is plenty to do the year around; am not afraid of work; always endeavor to make myself generally useful about the gallery; no bad habits; 8 years' experience; 23 years of age; with the right man, wages moderate. Address, Geo. A. Simmon, Photographer, Cleveland, Ohio.

An artist in ink, water colors, and crayon, desires a situation. Address G. H. Rupp, Akron, Ohio.

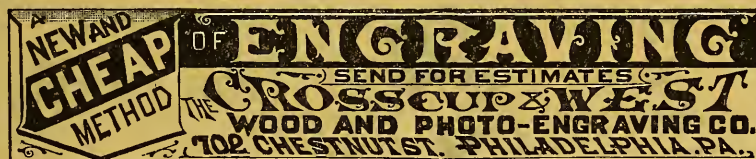
In a gallery doing general work. Address Wm. Donel, 39 Seneca St., Buffalo, N. Y.

As a retoucher and ink and crayon artist of six years' experience, in a strictly first-class gallery. Samples mailed if necessary. Address Thomas Black, care J. D. Skewes, 102 West 5th St., Cincinnati, Ohio.

A first-class retoucher, wishing to learn operating, would like to make some arrangements with a good photographer of a smaller town (West preferred). Address Geo. Crans, P. O. Washington, D. C.

ROSENGARTEN & SONS, MANUFACTURING CHEMISTS, PHILADELPHIA.

Nitrate of Silver, Bromide of Ammonium,
Chloride of Gold, Bromide of Potassium,
AND A GENERAL ASSORTMENT OF FINE CHEMICALS.



VIEWS OF BUILDINGS, MACHINERY AND STOVES, AUTOGRAPHS, MAPS, PATENTED ARTICLES, SEALS, MONOGRAMS.
TINTED ENVELOVES, CARDS, LETTER AND BILL HEADINGS, PORTRAITS, POSTERS.
CARD-MOUNT DESIGNS, CATALOGUE AND BOOK ILLUSTRATIONS.

We have introduced, and have now in successful operation, an improved method of *photo-engraving*, by which process we are enabled to produce relief plates at greatly reduced rates. The process of *photo-engraving* has very great advantages over *wood engraving*, for many subjects, but this advantage does not pertain to *all* subjects. We still continue our *wood-engraving* department as heretofore; and as we are alike interested in the two branches, you will consult your own interest by applying to us for estimates, and advice as to the best method for the subject required.

SPECIAL TO PHOTOGRAPHERS.—Outside of large cities, Engraving Offices do not exist, while in nearly every town and village there are those who need the services of the Engraver.

A little looking around, and making known the fact that you can take orders for Wood Engraving, would insure many orders. You could make a note of it on your business cards, and in other instances when you advertise your own business.

No doubt you are called upon at times to make views of Buildings, Machinery, Patent Articles, etc. in cases of this kind, if you would suggest the idea of having an engraving made, it would very likely secure an order.

We have a circular containing a variety of sizes and styles of engravings, with prices attached to each cut, which will give you an idea of prices, and enable you to give some information concerning cost. You can have this circular, upon application by mail, if you conclude to give it a trial, and we will pay you a liberal commission on all orders you secure.

N.B.—We want the address of every photographer in the country. Please send your card.

 AFTER SIX MONTHS TRIAL 
ARE PRONOUNCED

The Only Perfect Plate IN THE MARKET.

RELIABLE,

VERY SENSITIVE,

EASILY AND QUICKLY DEVELOPED,

ARE THE

LEADING FEATURES

OF THE

CAN BE

OBTAINED

OF ALL THE

PRINCIPAL

DEALERS IN

Photo-Materials,

OR DIRECT FROM

THE MAKER,

JOHN CARBUTT,

PHILADELPHIA.

CARBUTT'S

KEYSTONE VARNISH.

CARBUTT'S RUBY PAPER

NOTE.—Mr. Carbutt has just completed extensive alterations in order to increase his facilities for the manufacture of his Dry Plates, which will enable him to supply promptly orders to any extent and for any size, and thus avoid the previous unavoidable delay from the demand being greater than the supply.

KEYSTONE
PLATES.

CARBUTT'S



CAUTION.

DIRECT YOUR ORDERS TO

**DOUGLASS, THOMPSON & Co.**229 & 231 STATE ST. CHICAGO. 229 & 231 STATE ST.

WE HAVE NO CONNECTION WITH ANY OTHER HOUSE.
 WE DEAL EXCLUSIVELY IN PHOTOGRAPHERS' SUPPLIES.
 WE ATTEND STRICTLY TO OUR OWN BUSINESS.
 WE ARE NOT ENVIOUS OF OUR NEIGHBORS.
 WE ENDEAVOR AT ALL TIMES TO SPEAK THE TRUTH.
 WE DO NOT WATER OUR ALCOHOL.

WE INVITE YOUR ORDERS, AND WILL ENDEAVOR TO
 MAKE YOU OUR PATRONS BY SERVING YOU IN THE
 BEST MANNER POSSIBLE.

WE HAVE AN AMPLE STOCK TO MEET ALL DEMANDS,
 AND WILL MAKE PRICES LOW.

CAUTION.—PLEASE DIRECT YOUR ORDERS
 TO DOUGLASS, THOMPSON & CO.,
 AND REMEMBER THE NUMBER,

229 & 231**STATE ST.****CHICAGO.**

GAYTON A. DOUGLASS.
 HENRY G. THOMPSON.

DEALERS' DIRECTORY.

The following houses are to be recommended as the best for photographers in their localities.


S. T. BLESSING, New Orleans, La.	Douglass, Thompson & Co. "Great Central," Chicago, - - - Ills.	JAMES H. SMITH, Quincy, Ills.
SCOVILL MANF'G CO., 419 & 421 Broome St., New York.	D. J. RYAN, Savannah, Ga.	J. C. SOMERVILLE, St. Louis, Mo.
A. H. BALDWIN, 1 Chambers St., New York.	D. TUCKER & CO., Buffalo, N. Y.	BLESSING & BRO., Galveston, Texas.
G. S. BRYANT & CO. Boston, Mass.	WILSON, HOOD & CO., 825 Arch Street, Philadelphia, Pa.	B. FRENCH & CO. Boston, Mass.
WM. J. HAZENSTAB, 406 Market St., St. Louis, Mo.	EDWARD L. WILSON, Photo. Publisher, LANTERN SLIDES, 116 N. Seventh St., Philadelphia.	THEO. SCHUMANN, Atlanta, Ga.
OSCAR FOSS, San Francisco, Cal.	G. B O D E, Milwaukee, Wisconsin.	GATCHEL & HYATT, Louisville, Cincinnati, St. Louis.

Specialties.

ADVERTISING RATES FOR SPECIALTIES.—It will be understood that matter under this head is not to be considered as always having editorial sanction, though we shall endeavor to clear it of anything tending to deceive or mislead. Stock-dealers will find this a beneficial mode of advertising, and sure to pay largely. Six lines, one insertion, \$2.00, and 25 cents for each additional line, seven words to a line—in advance. *Operators desiring situations, no charge.* Matter must be received by the 23d to secure insertion. Advertisers will please not ask us for recommendations. We cannot undertake to mail answers to parties who advertise. Please always add your address to the advertisement.

ROCKWOOD SOLAR PRINTING CO.

GEO. G. ROCKWOOD, GEO. H. ROCKWOOD,
President. Superintendent.
J. AUGUSTUS RANDEL, *Business Manager.*

 PLATINUM AND SILVER PRINTS AT THE SAME PRICES.

New and Lower Price-list.

Size.	Unmounted.	Mounted.
11 x 14 and under.....	\$1 00.....	\$1 50
13 x 16 }	1 50.....	2 00
14 x 17 }		
16 x 20 }		
18 x 22.....	1 75.....	2 25
20 x 24.....	2 00.....	2 50
22 x 27 }	2 50.....	3 00
25 x 30 }		
26 x 32.....	3 00.....	3 75
29 x 36.....	4 00.....	5 00
30 x 40.....	5 00.....	6 00
35 x 45.....	6 00.....	7 50
40 x 50.....	8 00.....	10 00

SPECIAL NOTICE.—As so much depends upon the good printing qualities of a solar negative, we will make solar negatives from copies *without charge*, if the originals are sent to us with the orders for enlargements.

All orders must be accompanied by the cash. Make all P. O. orders payable to

“ROCKWOOD SOLAR PRINTING COMPANY,”
17 Union Square, New York.

ARTIST WANTED.—To go to Montevideo or Buenos Ayres. Must be thoroughly competent in crayon, india ink, water colors, and negative retouching. Apply to ROBT. J. CHUTE,
493 Washington St., Boston, Mass.

FOR SALE.—1 Ash Balustrade; 1 Snow Ground, 9½ x 11 feet; 1 Interior, 9½ x 11 feet; 1 Exterior, 8 x 10 feet.

The above articles are as good as new. The backgrounds are of Seavey's make, and are only sold so that the proprietor can make a change. Will be sold at nearly half price. Sample photographs on application. Address

M. WOLFE, Dayton, Ohio.

BUY THE NEW VOIGTLANDER & SON PORTRAIT LENSES if you want the best and quickest-working Lenses ever made.

GEO. E. CURTIS, *Niagara Falls, N. Y., writes:* The New No. 6 Voigtlander & Son instrument is the best I have ever seen or used. Too much cannot be said in praise of such Lenses.

J. C. GIBSON, *Louisiana, Mo., writes:* The New No. 5, A, Voigtlander & Son Lens gives entire satisfaction; I consider it superior to any 4-4 I ever used, having used many kinds of Lenses for over thirty years.

COOK ELY, *Oshkosh, Wis., writes:* The New No. 5, A, Voigtlander & Son Lens is a good one, and gives entire satisfaction.

LAUGHTON BROTHERS, *Norwich, Conn., write:* After trying one No. 5, New Voigtlander & Son Lens, we find it covers large field, cuts very sharp. For children it beats the lightning process all out.

FOR SALE.—Having all the out-door work I can attend to (I have decided to devote my whole time to that), I now offer my gallery for sale, at a price that will satisfy any one who means business or will investigate. It is no “played out concern” with “old traps;” *not by any means.* Best location in the city; up one flight; large operating-room with a fine light. It is really a good chance, and *no humbug.* Come and see for yourself. Address, “PHOTO.,”

Box 1537, Nashua, N. H.

WANTED.—A first-class printer, to take charge of that department in a large gallery. Must be thoroughly posted, and up to the times. Address Q. X., care *Philadelphia Photographer.*

BEWARE OF INFRINGEMENTS.—W. F. ASHE, 106 Bleecker St., New York, is the inventor and manufacturer of the *Telescopic* or *Extension Pedestal* for forming convenient heights of the pose. They are all stamped *Patented.*

CABINET CARDS OF GEN. GARFIELD.—To photographers and to the trade, \$18 per hundred, cash with order. Try some; they will sell over your counter. These are good studies, and the best and handsomest likenesses of the man.

W. J. BAKER,
Buffalo, N. Y.

BEST INVESTMENT IN AMERICA.—A well-furnished gallery, building, and two lots, on best street in county-seat; good stock of frames and notions, all for \$2000; will give time on part. No opposition in the county. Address

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J. L. CLARK.

Sweep smelter, gold and silver refiner, assayer. Special attention paid to refinings of photographers' waste. No. 10 Fayette St., between 9th and 10th, below Arch St., Phila., Pa.

References: Wm. H. Rhoads, artist-photographer, Phila.; Messrs. Schreiber & Sons, photographers, Phila.; H. M. Clifford, photographer, Phila.

Returns made in nitrate of silver or chemicals.

RECENT TESTIMONIALS TO THE USEFULNESS OF THE "PHILADELPHIA PHOTOGRAPHER."—Kind words and testimonials of satisfaction have been pouring in upon us of late, until we feel constrained to give a little space once more to some of the warmest expressions.

"Journals received, all O. K. I thought at first that I was not able to take the *Philadelphia Photographer* this year, but, after taking a second thought, came to the conclusion that I had best do without something else, and when they came I grasped the same like a drowning man to a straw."—SAMUEL ARMSTRONG. "This is the first year I have ever taken the *Philadelphia Photographer*, and had I known what I was losing by not having it, I would have subscribed for it if it had cost three times its subscription price. It comes to me like the dawn of day after a long night on the picket-post."—C. A. ROSE. "Please send me the best book extant, the *Philadelphia Photographer*, for one year, commencing with the January number."—MELVILLE SUMNER. "May you and your journal live long, to keep us together and improve the craft."—M. H. ALBEE. "I have been a reader of the *Philadelphia Photographer*, and think it the best of its kind there is published."—E. W. LYON. "I cannot afford to be without its valuable teachings and suggestions."—H. R. FARR. "I don't think I could get along successfully without your valuable magazine for a guide. So far I have ever found its advice and counsel good."—C. H. WELLS. "Send us the old reliable *Philadelphia Photographer* for 1880; can't do without it; I tried that one year, but it don't pay."—FOSNOT & HUNTER. "I want you to consider me a life subscriber (photographer's life at least) to your valuable magazine. I take other journals, but consider your's worth them all combined, and no live photographer will be without it; nor, indeed, can he afford to be without it in these days of improvement."—A. H. PARKES. "Glad to have so good a thing for so little, and wishing you lots of new subscribers, in great haste."—CHARLES F. HIMES. "Send me the *Philadelphia Photographer* for 1880, commencing with the January number. I see that I cannot get along without it."—E. F. FEIGER. "I have taken your valuable journal for a number of years. I think it is poor economy for a photographer to deprive himself of literature pertaining to his business. Even if business is dull, I think his expenses could be curtailed in some other direction more advantageous to himself."—F. C. WATSON. "Somehow or other I have neglected to send you the money, also my order for the *Photographer* for another year; but

I do so now, for I cannot do without it. Something might happen, you know; therefore, I want to keep posted, as I get more than the worth of the subscription in knowledge every year."—T. M. WELLS. "I cannot do without the *Photographer*, and I think it one of the best publications in America. It is well worth all you ask for it, to say nothing about the photograph that accompanies each copy."—C. B. TAYLOR. "I just found a photographer who paid forty dollars cash for the solar printing process contained in the journal of September, 1879, which cost me fifty cents. Quite a difference."—S. M. SMITH. "I think there is no photographic journal that I have seen (and I have seen most of them) that can compare with the *Philadelphia Photographer*."—HOWARD H. HUNTINGTON. "The *Philadelphia Photographer* I must have. I have been reading it for the last twelve years, and like it better every year."—F. A. DUNLAP. "I could not keep pace with the times without the *Philadelphia Photographer*. Every photographer in the land should take it."—F. J. CHESSINGTON.

\$5 a year, in advance. See page three of cover. EDWARD L. WILSON, Editor and Proprietor, 116 North Seventh Street, Philadelphia.

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JANUARY, 1879, AND OCTOBER, 1879, PHILADELPHIA PHOTOGRAPHER WANTED.—Will exchange for current numbers or pay fifty cents each for them in books. Parties sending them may keep the pictures if they wish. We want the letter-press to make up volumes for our friends.

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NEGATIVES WANTED.—Of all the large cities of the United States, Canadas, and South America (stereoscopic size), Panoramas, Harbors, and Bridges only. Parties having new, unused negatives will do well to send proofs with prices. Would contract with a good photographer for making negatives. Address

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For membership, address the Secretary.

EXCHANGE COLUMN.

To accommodate those who have old apparatus, etc., to EXCHANGE (not sell), we offer to insert advertisements in this column at the low rate of 15 cents per line (of seven words), or fraction of a line. It will be found a cheap and helpful way of "unloading" useless articles about your studio for better ones. Cash to accompany all advertisements.

SEPTEMBER, 1879, copies of this magazine are wanted to make up sets. 50 cents each, will be given in books by E. L. Wilson, Philadelphia.

WANTED.—To give first-class negatives of Washington, D. C., for first-class second-hand view lenses. Proofs free to all in earnest. Address Ranald Douglas, 819 Market Space, Washington, D. C.

FIFTY-THREE best wood-mounted, colored, and sealed slides, effects, etc.; cost \$82.50. Will exchange for backgrounds, accessories, solar camera, or anything that can be used in photograph business. Address C. Stafford, Palmyra, Marion Co., Mo.

One 5 x 8 mahogany, folding-bed, stereo camera; one pair view lenses, and one pair quick-acting, half-size portrait lenses, perfectly matched. All in good order. Want 2-3 or 4-4 lens and camera. Address F. L., care E. L. Wilson.

SITUATIONS WANTED.

No charge for advertisements under this head; limited to four lines. Inserted once only, unless by request.

By a first-class crayon artist; would prefer a town of ten thousand; can make pastel and oil portraits. Address Geo. Brown, Wellsville, N. Y.

By a lady, a position in a photograph gallery in New York city or immediate vicinity; understands negative retouching, mounting, and spotting; also finishing pictures in crayon, india ink, and water colors. Address C. L., Office of Cooper Institute, New York City.

By a young man of steady habits, as general assistant; one year's experience; would like to learn the business thoroughly; wages not so much an object as improvement. Address Joel Eby, Waterloo P. O., Ontario.

As operator or printer; eight year's experience. Address W. M. Deming, West Winsted, Conn.

In a good, reliable gallery, by a young man who understands all branches of the art. No postals. Address C. F., 79 & 81 Genesee St., Utica, N. Y.

Permanent position by operator and retoucher of six years' experience in first-class galleries; salary expected, \$18. Address, for samples, if you want steady, temperate man, M. L. Cormany, P. O. Box 361, Ypsilanti, Mich.

By a young man, as printer and toner; two years with last employer; good references; wages reasonable. Address P. O. Box 230, Waterford, Pa.

A FIRST-CLASS photographer (portrait or landscape) wishes to connect with some good, reliable establishment. Good salary expected. Location no object. Address Reliable, care of E. L. Wilson, Editor P. P.

By a young man, to do retouching and general finishing. Address P. O. Box 1031, Binghamton, N. Y.

By a photographer acquainted with all parts of the art, as printer and negative retoucher, or operator in a prominent gallery. Distant employment only accepted if the fare is free. O. Berkan, Riverside, Burlington Co., N. J.

As printer, or toner, or dark-room man. Address J. D. Davis, Rear 51 Bacon St., Providence, R. I.

By a first-class printer and retoucher. Address E. W. Doubleday, Box 1513, Saratoga Springs, N. Y.

By a young lady as retoucher; will take care of reception-room. Address L. B. P., Box 999, Ypsilanti, Michigan.

By a first-class practical printer of six years' experience in two of the finest galleries in Michigan. References the best. Address Chas. R. Baker, 303 Woodward Ave., Detroit, Mich.

By a young man, who is capable of filling the position of operator, retoucher, or printer. Address E. Robinson, Box 204, Cedar Rapids, Iowa.

A first-class assistant operator, well up in all branches. Would also instruct in the collodion transfer process, now in progress with the firm of A. & G. Taylor, 763 Broadway, New York. Address J. Waldron, in care of Mr. W. Vandroef, 77 Newark Avenue, Jersey City, New Jersey.

ROSENGARTEN & SONS, MANUFACTURING CHEMISTS, PHILADELPHIA.

Nitrate of Silver, Bromide of Ammonium,
Chloride of Gold, Bromide of Potassium,
AND A GENERAL ASSORTMENT OF FINE CHEMICALS.

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 The last chapter is on a subject entirely new and fresh, and is finely illustrated.

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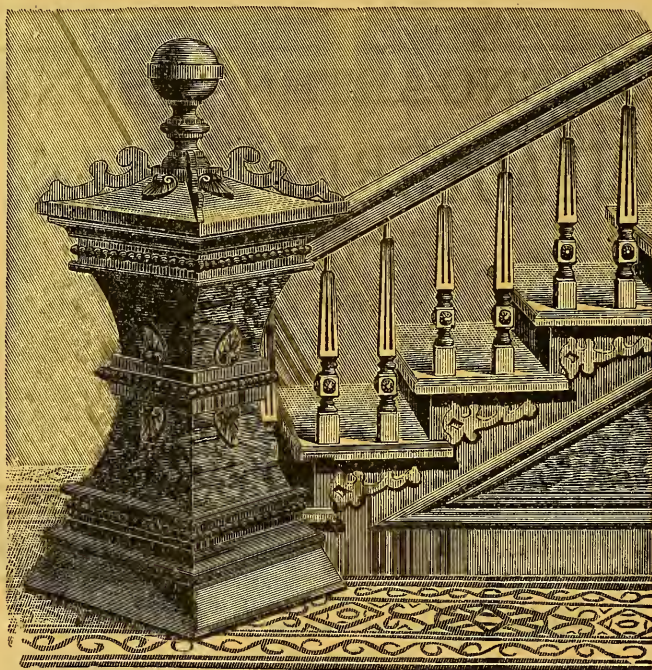
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LIGHT, DURABLE, EFFECTIVE. PRICE, BOXED, \$13.50.

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SEE PHOTOGRAPH IN AUGUST NUMBER PHILADELPHIA PHOTOGRAPHER

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GIVE US YOUR NAME, AND WE WILL
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PUBLISHED MONTHLY.

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Photographers' Supplies.

PRICES LOW.

STOCK LARGE.

ORDERS FILLED PROMPTLY.

SATISFACTION GUARANTEED.

GAYTON A. DOUGLASS,
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ADVERTISING RATES FOR SPECIALTIES.—It will be understood that matter under this head is not to be considered as always having editorial sanction, though we shall endeavor to clear it of anything tending to deceive or mislead. Stock-dealers will find this a beneficial mode of advertising, and sure to pay largely. Six lines, one insertion, \$2.00, and 25 cents for each additional line, seven words to a line—in advance. *Operators desiring situations, no charge.* Matter must be received by the 23d to secure insertion. Advertisers will please not ask us for recommendations. We cannot undertake to mail answers to parties who advertise. Please always add your address to the advertisement.

ROCKWOOD SOLAR PRINTING CO.

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 PLATINUM AND SILVER PRINTS AT THE SAME PRICES.

New and Lower Price-list.

Size.	Unmounted.	Mounted.
11 x 14 and under...	\$1 00	\$1 50
13 x 16 }		
14 x 17 }	1 50	2 00
16 x 20 }		
18 x 22	1 75	2 25
20 x 24	2 00	2 50
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26 x 32	3 00	3 75
29 x 36	4 00	5 00
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SPECIAL NOTICE.—As so much depends upon the good printing qualities of a solar negative, we will make solar negatives from copies *without charge*, if the originals are sent to us with the orders for enlargements.

All orders must be accompanied by the cash. Make all P. O. orders payable to

"ROCKWOOD SOLAR PRINTING COMPANY,"
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JULY 13th, 1880.

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FOR SALE.—A photograph gallery in first-class running order; county seat; excellent surrounding country; instruments, backgrounds, etc., the best. Good prices. Address

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WANTED.—A first-class retoucher. Apply to
WILSON, HOOD & Co.,
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GREAT SUCCESS OF SEAVEY'S EXHIBIT
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THE \$35.00 EASTLAKE FIREPLACE AND CABINET COMBINED. Pronounced the cheapest and best thing of the kind yet out.

SEAVEY'S STILE, \$15.00, is a most practical, useful, and novel rustic accessory; suitable for subjects of all ages, groups, etc. Can be used Summer and Winter. By late improvements, it can be used as Stile, Board Fence, and Gate, and costs no more than formerly; packs in less space.

Now is the time to order *Winter and Interior Backgrounds*.

SEAVEY'S INITIAL OR MONOGRAM ACCESSORY. Any letter or combination supplied.

See illustrations and descriptions in Philadelphia and St. Louis Photographic Journals for September and October.

Address LAFAYETTE W. SEAVEY,
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FOR SALE OR EXCHANGE.—One interior ground, two exterior, one cottage window. Will be sold cheap, or will exchange for equal good grounds. Sample photograph on application. Will exchange for 12 or 14 inch short-focus condenser.

H. NOR, New Brighton, Pa.

FOR SALE.—Photograph gallery in the most pleasant and loveliest town in Kansas. Population 3500 and increasing. Is doing business in a large territory. Living rooms adjoining. Parlor and reception-room on second floor. Everything convenient. This is a good opportunity, and cheap for cash. For particulars, address

LOCK BOX 88,
Newton, Harvey Co., Kansas.

FOR SALE.—Having all the out-door work I can attend to (I have decided to devote my whole time to that), I now offer my gallery for sale, at a price that will satisfy any one who means business or will investigate. It is no "played out concern" with "old traps;" *not by any means*. Best location in the city; up one flight: large operating-room with a fine light. It is really a good chance, and *no humbug*. Come and see for yourself. Address,

"PHOTO,"
Box 1537, Nashua, N. H.

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NASHVILLE, Sept. 22d, 1880.

It being the desire of the manufacturers of the Dry Plates to have more time in furnishing the Committee with the plates, you will please announce the extension to November 1st, which, I think, will suit all.

In giving the shorter time, my intention was to favor the manufacturers, by bringing this great improvement more speedily before the fraternity.

Some of the Committee also desire the size to be 8 x 10, instead of 5 x 8, as previously announced. For this reason, I would suggest to the manufacturers who wish their plates tested, to at once give me their intention of the fact. This will enable me, after consulting with all the Committee, to give the size each Committee wishes to have. Respectfully,

T. M. SCHLEIER,
Chairman Committee on Dry Plates.

BEWARE OF INFRINGEMENTS.—W. F. ASHE, 106 Bleecker St., New York, is the inventor and manufacturer of the *Telescopic* or *Extension Pedestal* for forming convenient heights of the pose. They are all stamped *Patented*.

AN EXCELLENT OPPORTUNITY.—FOR SALE.—A good gallery; all complete for first-class work. Splendid living rooms adjoining, on same floor. Good location and good business. Will be sold cheap for cash; owner wishing to retire from business. Address A. E. RAYMOND,
Fulton, N. Y.

FOR SALE.—A gentleman (not a photographer), having on his hands a photograph gallery, would sell it for half its value, cash; an excellent opportunity for a young man with small capital. Everything is in perfect order; nothing to do but go to work. The rooms are large and neatly furnished, gas and water. Over 5000 negatives; one set alone (30) in constant demand have nearly paid the rent.

Apply to THOMAS D. HARRISON,
27 Water St., New York.

WANTED.—A first-class artist in water color, ink, etc., good wages and permanent situation.

Address "X," care Gatchel, Hyatt & Mullet,
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FOR SALE OR EXCHANGE.—One exterior Seavey ground, 9 x 11; two interior Seavey grounds, 9 x 11; one snow Seavey ground, 9 x 11; one cottage window, with vines; one cabinet and fireplace (Seavey's best); one round-end balustrade (Seavey's best); one Seavey sleigh.

All perfectly good, and nearly new.

SMITH & VANDRELZEN,
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MAKE YOUR OWN ENLARGEMENTS!

WOODWARD'S IMPROVED SOLAR CAMERAS can be ordered through any stockdealer or from the undersigned. Send for reduced price list.

D. A. WOODWARD,
Baltimore, Md.

BUY THE NEW VOIGTLANDER & SON PORTRAIT LENSES if you want the best and quickest-working Lenses ever made.

GEO. E. CURTIS, *Niagara Falls, N. Y., writes*: The New No. 6 Voigtlander & Son instrument is the best I have ever seen or used. Too much cannot be said in praise of such Lenses.

J. C. GIBSON, *Louisiana, Mo., writes*: The New No. 5, A, Voigtlander & Son Lens gives entire satisfaction; I consider it superior to any 4-4 I ever used, having used many kinds of Lenses for over thirty years.

COOK ELY, *Oshkosh, Wis., writes*: The New No. 5, A, Voigtlander & Son Lens is a good one, and gives entire satisfaction.

LAIGHTON BROTHERS, *Norwich, Conn., write*: After trying one No. 5, New Voigtlander & Son Lens, we find it covers large field, cuts very sharp. For children it beats the lightning process all out.

NORTH'S IMPROVED "APPLE-BLOSSOM" NEGATIVES.—We have made an attractive addition to our Printing-in Negatives, by placing an *old moss-covered picket-fence and steps* by the old tree, making it more realistic than ever. Sample print sent to parties, to be returned promptly.

See other advertisement in this journal for particulars.

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PERFECTION VIGNETTES FOR the SOLAR CAMERA.
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Photographers requiring the best and quickest working lenses in the world, please read the two-page advertisement of Benjamin French & Co., and send for price-lists. Lenses sent to any one, C.O.D., express to hold money one week for trial; if not satisfactory, money refunded.

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They are all that can be desired for boat pictures, swing, sitting on rock, stile, etc., or unsupported by any accessory; in fact, can be used by every photographer, with charming effect. We make 8 x 10, 11 x 14, and 14 x 17 sizes, either showing the tree and branches of beautiful apple-blossoms mainly, or all of the ground. Prices, \$2.00, \$3.50, and \$5.00, respectively.

Stock dealers are becoming interested, and all supply them.

As there is nothing of the kind in the market, and it supplies a long-felt want, we feel assured of its complete success to all needing just such an article. We ship them, by express, carefully packed, to any address, on receipt of price.

WALTER C. NORTH,
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TWENTY YEARS' EXPERIENCE.

J. L. CLARK.

Sweep smelter, gold and silver refiner, assayer. Special attention paid to refinings of photographers' waste. No. 10 Fayette St., between 9th and 10th, below Arch St., Phila., Pa.

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GREAT BARGAINS.—We have some second-hand portrait and view lenses for sale, of nearly all sizes. To any one in want of a good lens, at low price, we will send list of all sizes we have.

BENJAMIN FRENCH & Co., Boston.

INSTITUTE OF NEGATIVE AND POSITIVE RETOUCHING.

BARTHOLOMEW MEYER, 182 S. CLARKE ST., CHICAGO.

REFERENCES.

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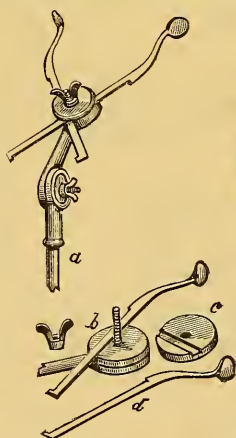
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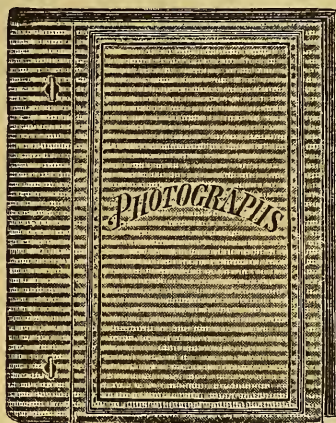
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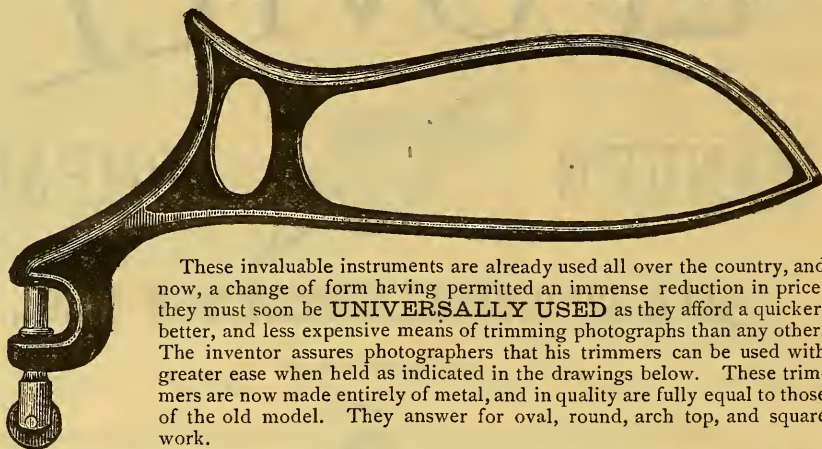
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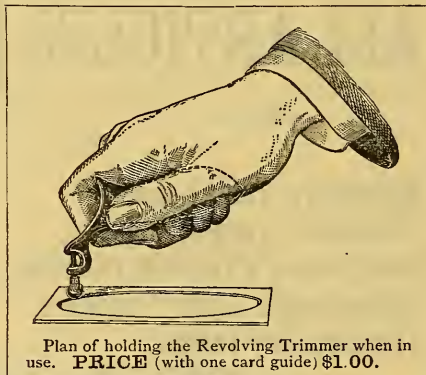
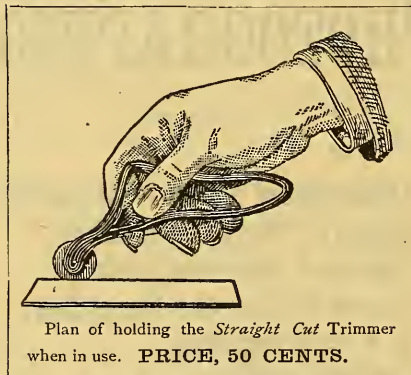
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2 x 3 $\frac{5}{8}$	4 x 5 $\frac{3}{8}$	5 $\frac{3}{8}$ x 7 $\frac{3}{4}$	7 $\frac{1}{2}$ x 9 $\frac{3}{4}$
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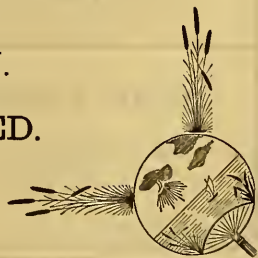
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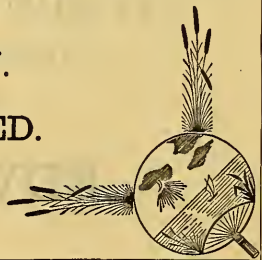
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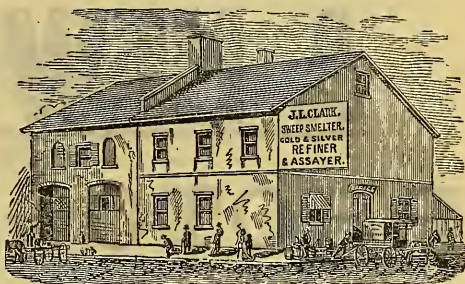
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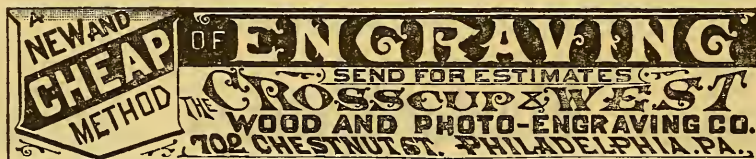
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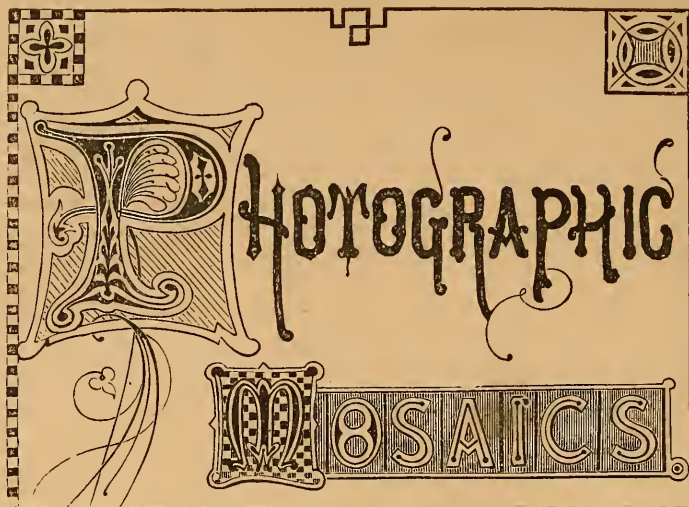
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